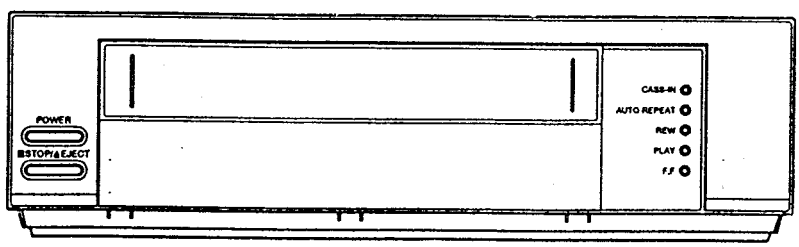
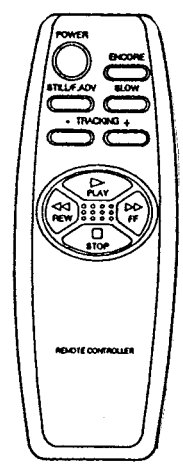
hemmersbach
TS Technik-Service

SERVICE MANUAL OA24

WATSON
VA 3530





• Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. Insulation resistance test
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

2. Dielectric strength test
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

3. Clearance distance
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metalic parts. See table below.

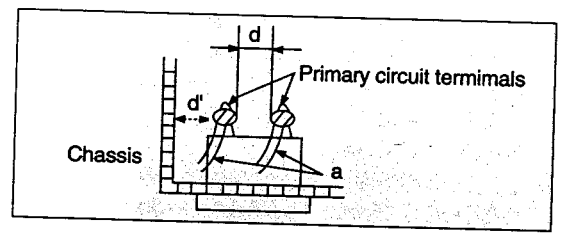


Fig.8

Table 1: Rating for selected areas

AC Line Voltage	Region	Insulation Resistance	Dielectric Strength	Clearance Distance (d), (d')
100V	Japan	1M/500 V DC	1kV 1 minute	≥ 3 mm
110 to 130V	USA & Canada	---	900 V 1 minute	≥ 3.2 mm
* 110 to 130 V 200 to 240 V	Europe Australia	10 M/500 V DC	4kV 1 minute	≥ 6 mm (d) ≥ mm (d') (a: Power cord)

*Class Ⅱ model only.

Note: This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Leakage current test

Confirm specified or lower leakage current between B (earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audo input and output terminals, microphone jacks, earp-hone jacks etc.)

Measuring Method: (Power ON)
Insert load Z between B (earth ground, power cord plug prongs) and exposed accessible parts. Use and AC voltmeter to measure across both terminals of load Z.
See figure and following table.

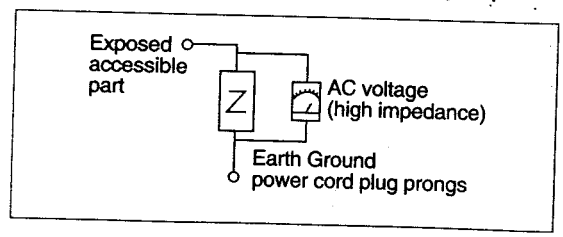


Table 2: Leakage current ratings for selected areas

AC Line Voltage	Region	Load Z	Leakage Current (i)	Earth Ground (B) to:
100V	Japan	1KΩ	i ≤ 1 mArms	Exposed accessible parts
110 to 130 V	USA & Canada	1.5KΩ 1.5kμ	i ≤ 0.5 mArms	Exposed accessible parts
110 to 130 V 200 to 240 V	Europe Australia	1KΩ	i ≤ 0.7 mApeak i ≤ 2 mAdc	antenna earth terminals
		1KΩ	i ≤ 0.7 mApeak i ≤ 2 mAdc	Other terminals Other terminals

Note : This table unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

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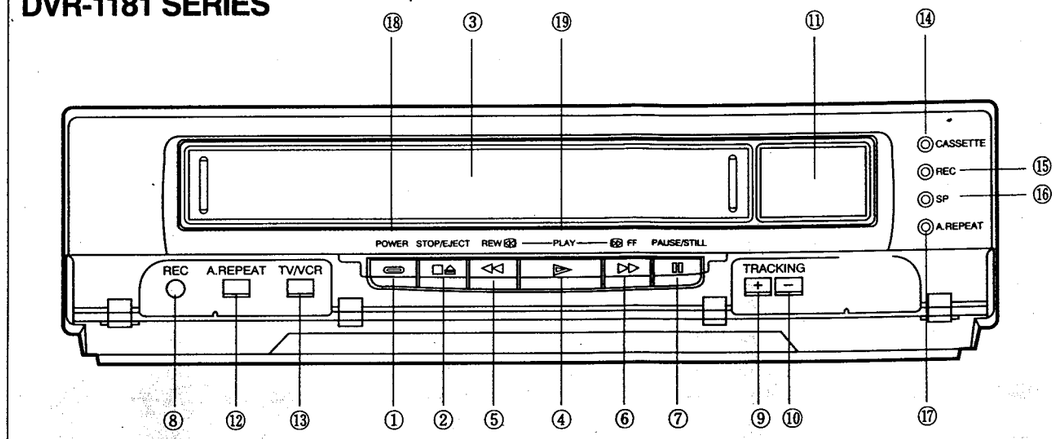
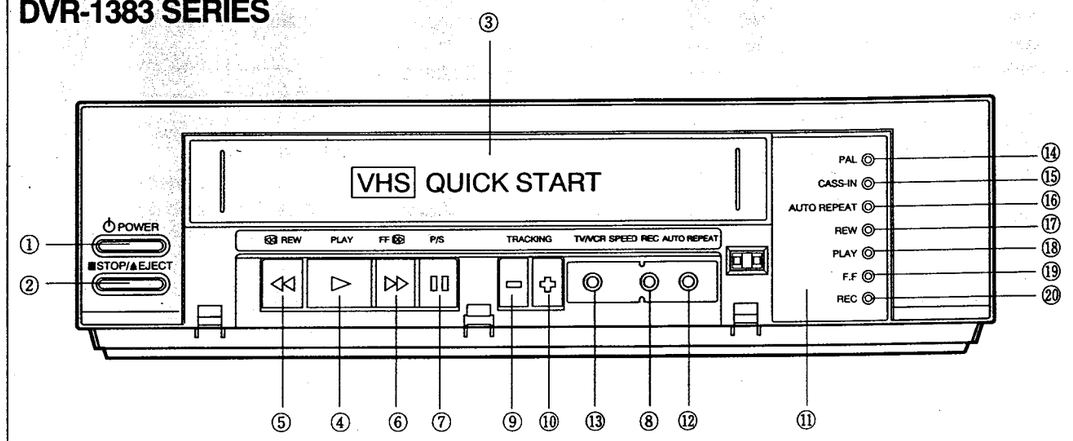
SECTION 1. GENERAL
1-1. IDENTIFICATION AND OPERATION OF CONTROLS

DVR-1181 SERIES



DVR-1383 SERIES



① POWER Button
Turns VCR power on and off.

② STOP/EJECT Button
In STOP mode this button makes a cassette come out of compartment. In any other mode except STOP this but-ton operates STOP function.

③ Cassette Compartment
When the cassette is inserted in this compartment, the cassette will automatically be ready for operation.

④ PLAY Button
Press this button to playback the recorded tape.

⑤ REW Button
The REW Button serves a dual purpose. Press this button to rewind the tape. When this button is pressed during the playback mode, the picture will move quickly backward as three times of playback speed. When this button is pressed again, the picture will move quickly backward as nine times of playback speed and you can search for the desired part of program. When play but-ton is pressed, the recorder will return to the playback mode.

N.B : When this button is pressed, all other control keys are inoperable until AUTO REPEAT is pressed again

⑥ FF Button
The FF Button serves a dual purpose. Press this button to fast forward the tape. When this button is pressed during the playback mode, the picture will move quickly forward as three times of playback speed. In this mode, when this button is pressed again, the picture will move quickly forward as nine times of playback speed and you can search for the desired part of program. When play button is pressed, the recorder will return to the playback mode.

⑦ PAUSE/STILL Button
In the recording mode, you can stop the operation of the recorder temporarily. In the playback mode, a picture will apear in the STILL mode. The STILL mode is released automatically after 5 minutes, and will return to the PLAY mode.

⑧ RECORD Button
Press this button to record. If the safety tab has been removed from the cassette, it will not be possible to record, thereby preventing your recordings from accidentally erased.

⑨ ⑩ TRACKING −/+ Buttons
Press one of the buttons to eliminate noise bars or black streaks across the picture during playback.

⑪ REMOTE Sensor
Receives signals from the Remote Control.

⑫ AUTO REPEAT Button
Press this button and the recorder will automatically rewind the tape at the end of the signal and repeat the playback continuously until the auto repeat button is pressed again.

⑬ TV/VCR Button
Press this button to select the TV or VCR mode.

⑭ PAL indicator lamp
Illuminates when VCR operates in PAL mode.

⑮ CASS-IN indicator lamp
Illuminates when a cassette tape is loaded.

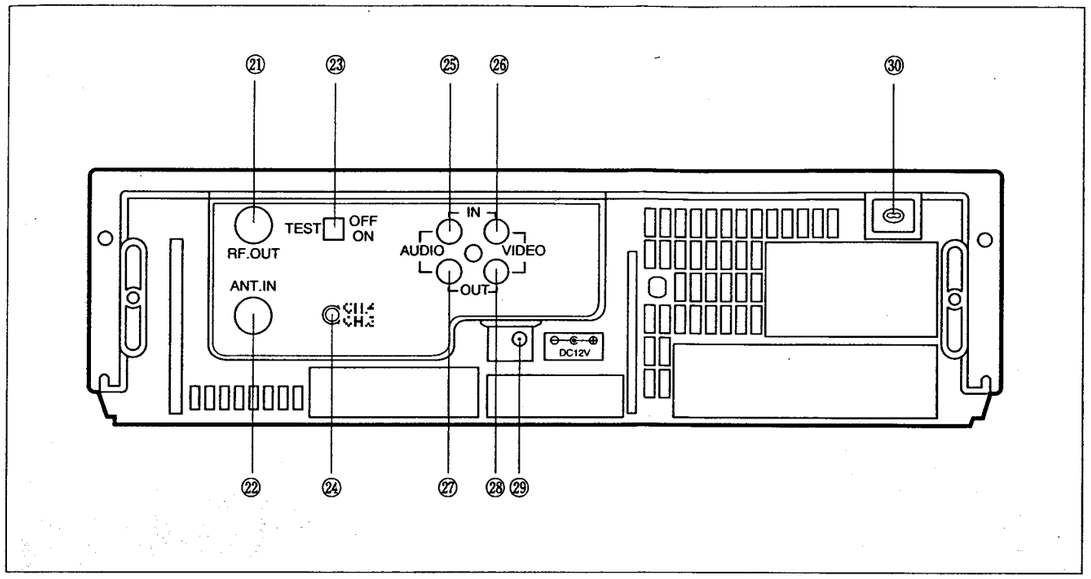
⑯ AUTO REPEAT lamp
Illuminates when AUTO REPEAT button is pressed.

⑰ REW lamp
Illuminates when REW button is pressed.

⑱ PLAY lamp
Illuminates when the play, still, auto repeat button is pressed.

⑲ F.F lamp
Illuminates when FF button is pressed.

⑳ REC lamp
Illuminates when REC button is pressed.



㉑ ANT IN Terminal
Connect a TV aerial to this terminal.

㉒ RF OUTPUT Terminal
Connect to the aerial terminal of a TV receiver with the RF Cable (provided.)

㉓ TEST SIGNAL SWITCH
In test signal mode, you can check channel accordance of the TV and VCR.

㉔ RF OUTPUT CHANNEL ADJUSTMENT SCREW
In video piayback mode, you can adjust more accurately the RF OUTPUT for obtaining clean picture.

㉕ AUDIO IN SOCKET (PHONO)

㉖ VIDEO IN SOCKET (PHONO)

㉗ AUDIO OUT SOCKET (PHONO)

㉘ VIDEO OUT SOCKET (PHONO)

㉙ DC JACK
Connect this Jack to DC Source (DC 12V)

㉚ POWER CORD
Conncet this cord into the AC output.

SECTION 2. ELECTRICAL ADJUSTMENTS

2-1. ALIGNMENT AND ELECTRICAL ADJUSTMENT

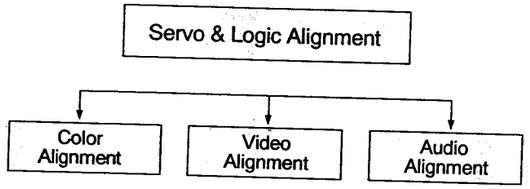
For these adjustment, use the equipment mentioned below and proceed by using the alignment tape and video signal.

Instrument and Tools Required

1. Color TV receiver.
2. Oscilloscope having 10 MHz or more bandwidth.
3. Color-bar generator.
4. Frequency counter.
5. VTVM.
6. VOM (20 KΩ /V).
7. Audio oscillator.
8. Audio attenuator.

Signal Level and Input and Output ImpedanceRequirement

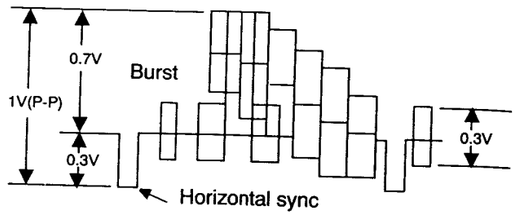
1. Video input: Negative syne, 1Vp-p standard composite video signal, 75Ω.
2. Video output: Same as above.
3. Audio input: Line - 10dBs, 47KΩ.
4. Audio output: -50dBs, 10KΩ or less.



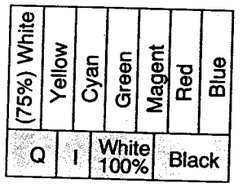
Adjustment Sequence

The VCR should be adjusted in the sequence shown below.

The suitable output waveform of the color-bar singa genrator is shown below.



Color bar signal waveform



Color bar pattern

2-2. SERVO-LOGIC CIRCUIT ADJUSTMENT METHOD

1. VIDEO HEAD SWITCHING POSITION

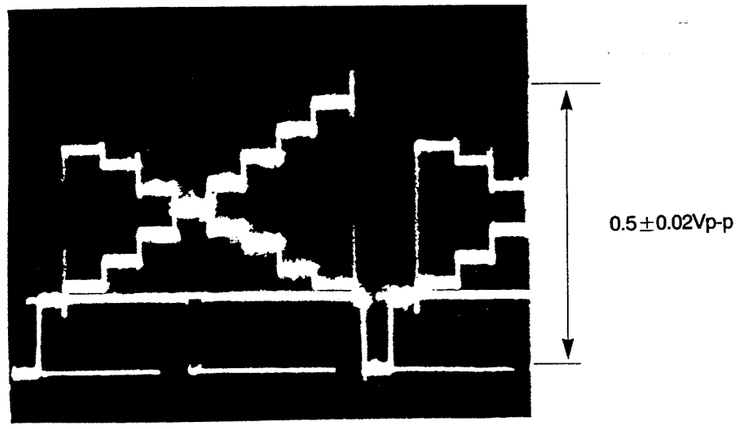
Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV501	PT01 3 PIN TP396	Oscilloscope	Play	DP-1

1) Play back the test tape.
2) Set the oscilloscope in the chop mode connect the CH1 to SW pulse PT01 2 PIN the CH2 to TP396 with CH1 triggering.
3) Adjust RV501 for the positive trigger until 6.5H±0.5H cycles before the vertical SYNC pulse.

1. E E VIDEO LEVEL

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV395	TP395	Oscilloscope	EE	—

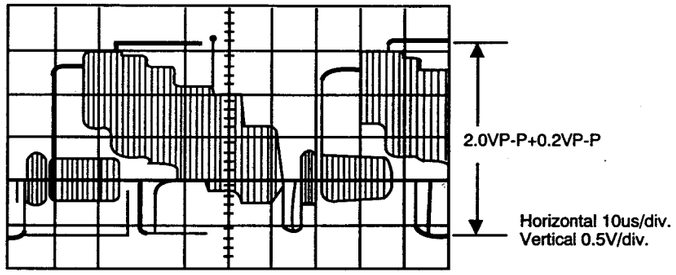
1) Feed the color bar signal to the line input terminal. And set for the stop (EE) mode.
2) Conncet the oscilloscope to TP359 and trigger the scope with a composite SYNC signal at TP313. (COMP.SYNC.)
3) Adjust the oscilloscope so that it can display a waveform of approx. 2H.
4) Adjust RV395 to obtain 0.5±0.02 Vp-p between SYNC TIP and 100% white level.



2. PLAYBACK Y-SINGAL OUTPUT LEVEL

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV396	TP396	Oscilloscope	PB	DP-1

1) Playback the test tape (Color Bar Signal).
2) Connect the oscilloscope to TP396 and trigger the scope will a composite SYNC signal at TP313.
   Adjust the scope so that it can display a waveform of approx. 2H.
3) Adjust RV396 to optain 2.0VP±0.2 Vp-p between the SYNC TIP and 100% white level.



3. SYNC TIP FREQUENCY

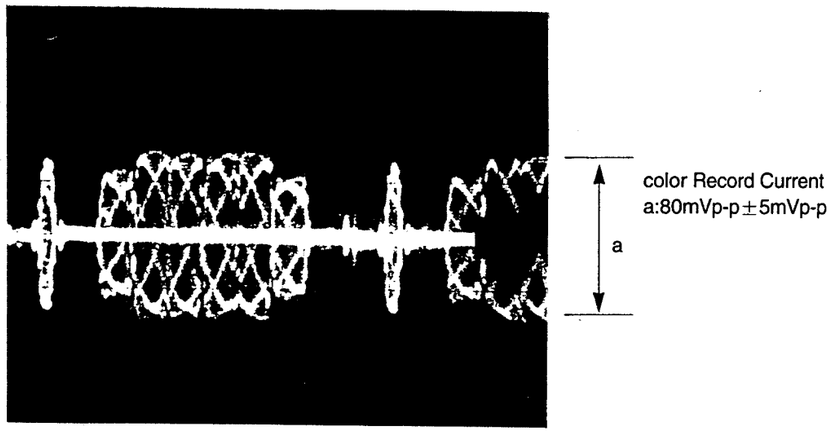
Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV391	TP391	Freq. Counter	REC.	—

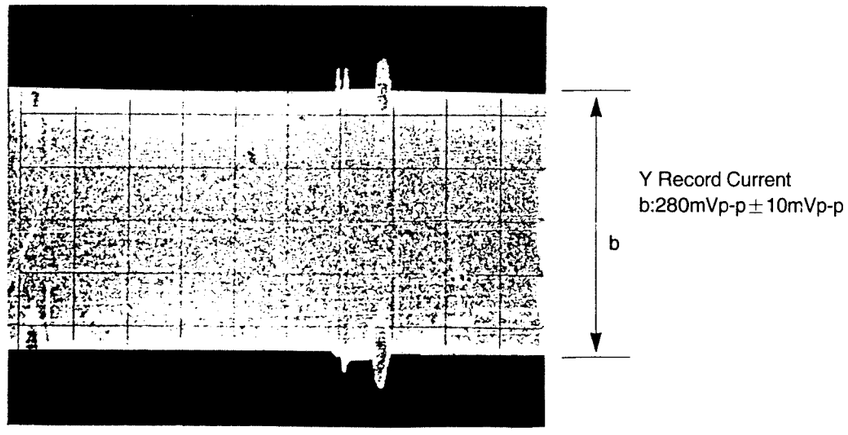
1) Set the unit to stop mode without video signal. (Jack of video line input is shorted with ground).
2) Conncet the frequency counter to TP391.
3) Adjust RV391 until the SYNC TIP frequency becomes 3.80 MHz±0.1 MHz.

4. LUMINANCE AND COLOR RECORD CURRENT

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV339 RV491	TP399	Oscilloscope	REC.	Blank Tape

1) Input Color bar signal in 'video line in'.
2) Make every adjustment in REC mode.
3) Connect CH. 1 of oscilloscope to TP399 and TP GND and CH. 2 TP313 (C.SYNC), and then trigger the scope with an external signal.
4) Adjust RV491 Until the color record current level (RED REFERENCE) becomes 80±5mVp-p.
5) Connect CH. 1 of oscilloscope to TP399 and TP GND and CH. 2 TP313 (C.SYNC), and then trigger the scope with an external signal.
6) Adjust RV399 Until the sync. Luminance level becomes 300±10mVp-p.

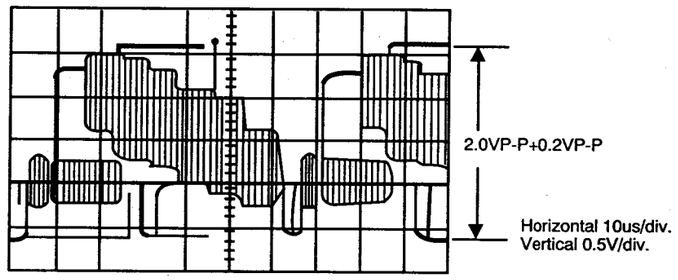




5. FM DEVIATION

Adj. Location	Checking Point	Measuring Equipment	Mode	Test Tape
RV392	TP396	Oscilloscope	PB & REC	DP-1 Color Bar Blank Tape

1) Confirm that the adjustment for the playback Y-Signal output level has been made correctly.
2) Feed the color bar signal to the line terminal, and set the VCR to the record mode.
3) Connect the oscilloscope to TP396 and trigger the scope with a composite sync signal (TP313).
4) Record the color bar signal for a few minute and playback it. Then confirm that the playback Y-signal output level is 2.0 Vp-p±0.2 Vp-p.
5) If the playback y signal output level is not 2.0 Vp-p±0.2 Vp-p, the adjust as follows.
   5-1) Set the VCR in the record mode.
   5-2) Turn the variable RV392 a little.
   5-3) Record the color bar signal for a few minute and playback it.
   5-4) Confirm the playback Y signal output is 2.0 Vp-p±0.2Vp-p.
   5-5) Repeat from step until the playback Y-signal output level becomes 2.0 Vp-p±0.2Vp-p between the sync. TIP and 100% white level.



2-4. AUDIO CIRCUIT ADJUSTMENT METHOD

1. PLAYBACK OUTPUT LEVEL

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
RV291	Audio Line Out	Audio Level Meter	PLAY Mode	1KHz, 0dBm

1) Connect the audio level meter to the audio line output jack.
2) Play back the test tape.
3) Adjust RV291 unitl the audio level meter reads -5.0 dBs play back output.

2. PLAYBACK OUTPUT FREQUENCY CHARACTERISTIC

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
Checking	Audio Line Out	Audio Level Meter	PLAY Mode	1KHz, 0dBm 6KHz, 0dBm

1) Playback the Test tape, and confirm that the playback output level at 6 KHz is within 0±3 dB as referenced to the 1 KHz playback output level.

3. BIAS CURRENT ADJUSTMENT AND OSCILLATION FREQUENCY CHECKING

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
RV292	TP201, TP202	Frequency Counter	REC. Mode	Blank Tape

1) Supply the signal in the OPEN mode
2) Conncet the positive lead of the VTVM to TP201 and negative lead to TP202.
3) Set the VCR in recording mode.
4) Confirm the frequency counter display is 70 KHz±10% and adjust RV292 until VTVM reads 2.3 mVrms

4. RECORD-PLAYBACK FREQUENCY RESPONSE

Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
Checking	Audio Line Out	Audio Level Meter Audio Signal Generator	REC. Play	Blank Tape

1) Connect the audio signal generator to the audio line input jack, and the audio level meter to the audio line output jack
2) Record referene audio signal fo the 400 Hz and 8 KHz (SP) audio signal at -20 dBs.
3) Check to insure that 8 KHz playbck output level is within -1±3 dB as referenced to the 400 Hz playback output level.(SP)
4) If the difference between 8 KHz and 400 Hz playback output level is more than +1 dB, increase the bias current more than 2.3mVms, and if the difference is less than -3 dB, reduce the bias current less than 2.3 mVrms.

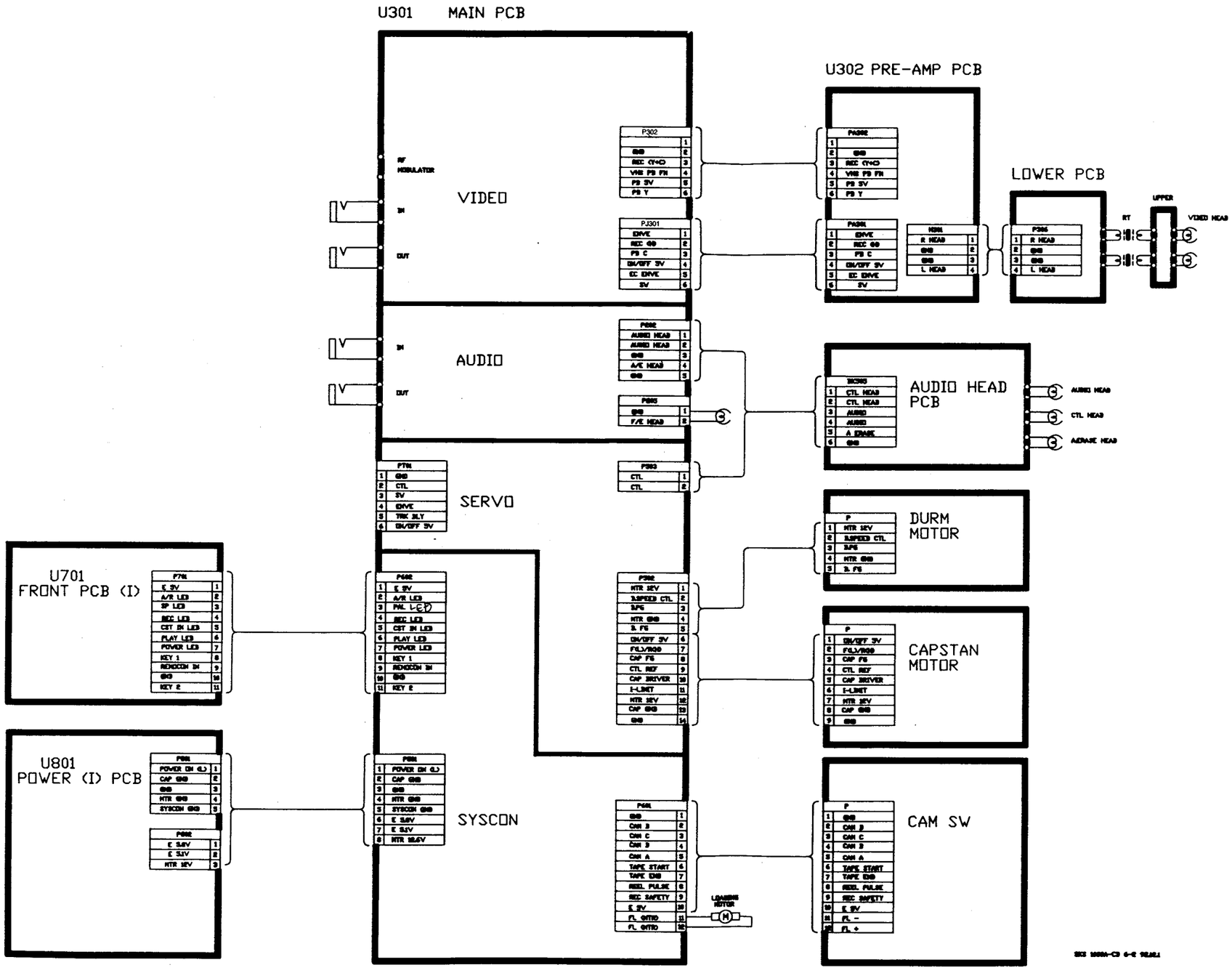
5. RECORD-PLAYBACK OUTPUT LEVEL

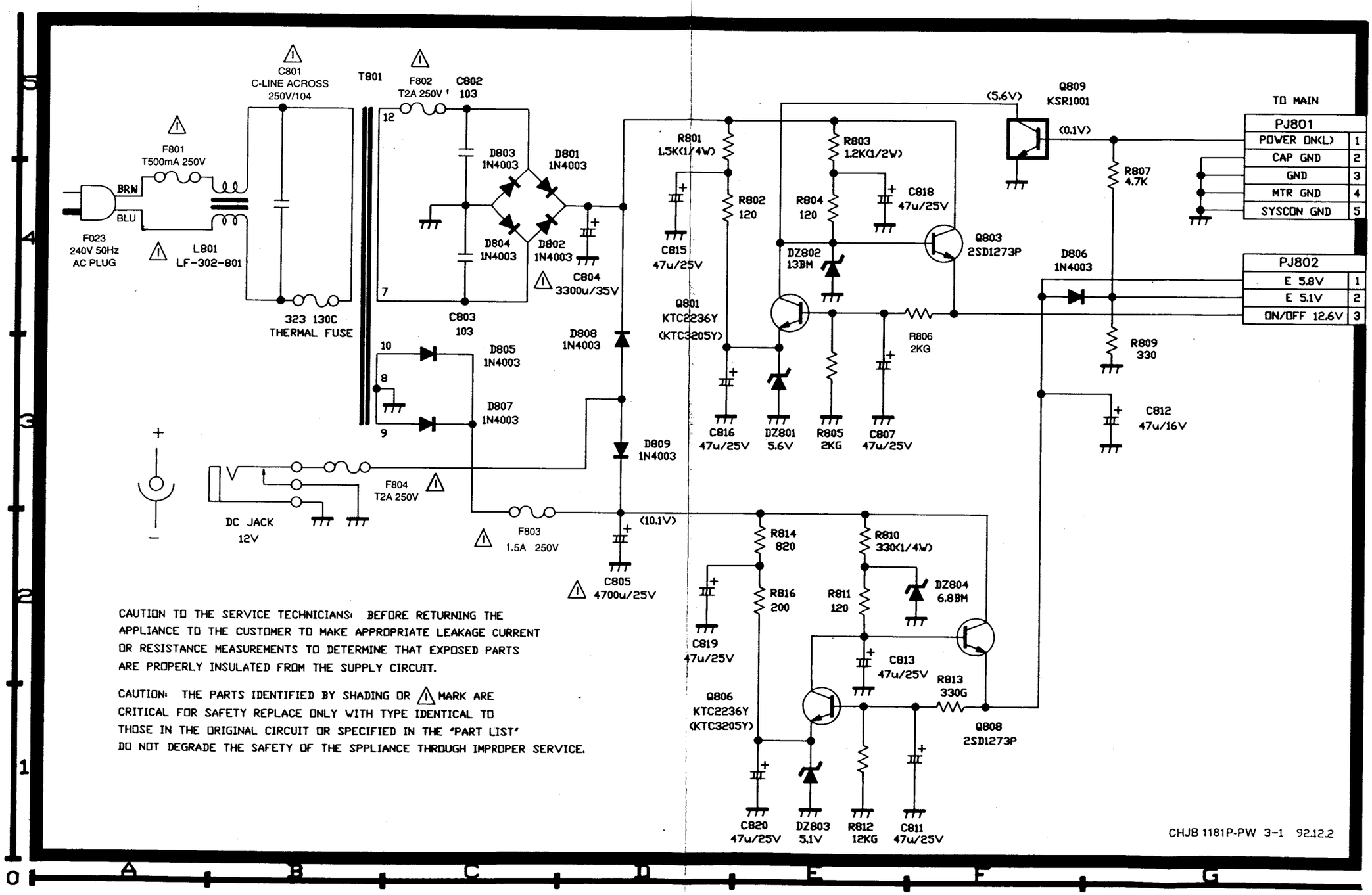
Adj. Location	Measuring Point	Measuring Equipment	Condition of Adj.	Test Tape
Checking	Audio Line Out	Audio Level Meter Audio Signal Generator	REC. Play	Blank Tape

1) Connect the audio signal generator to the audio line input jack.
2) Record and playback the input of the audio reference signal 1 KHz, -10 dBm.
3) Confirm that play output level is -5± dBs as referenced to the playback output level

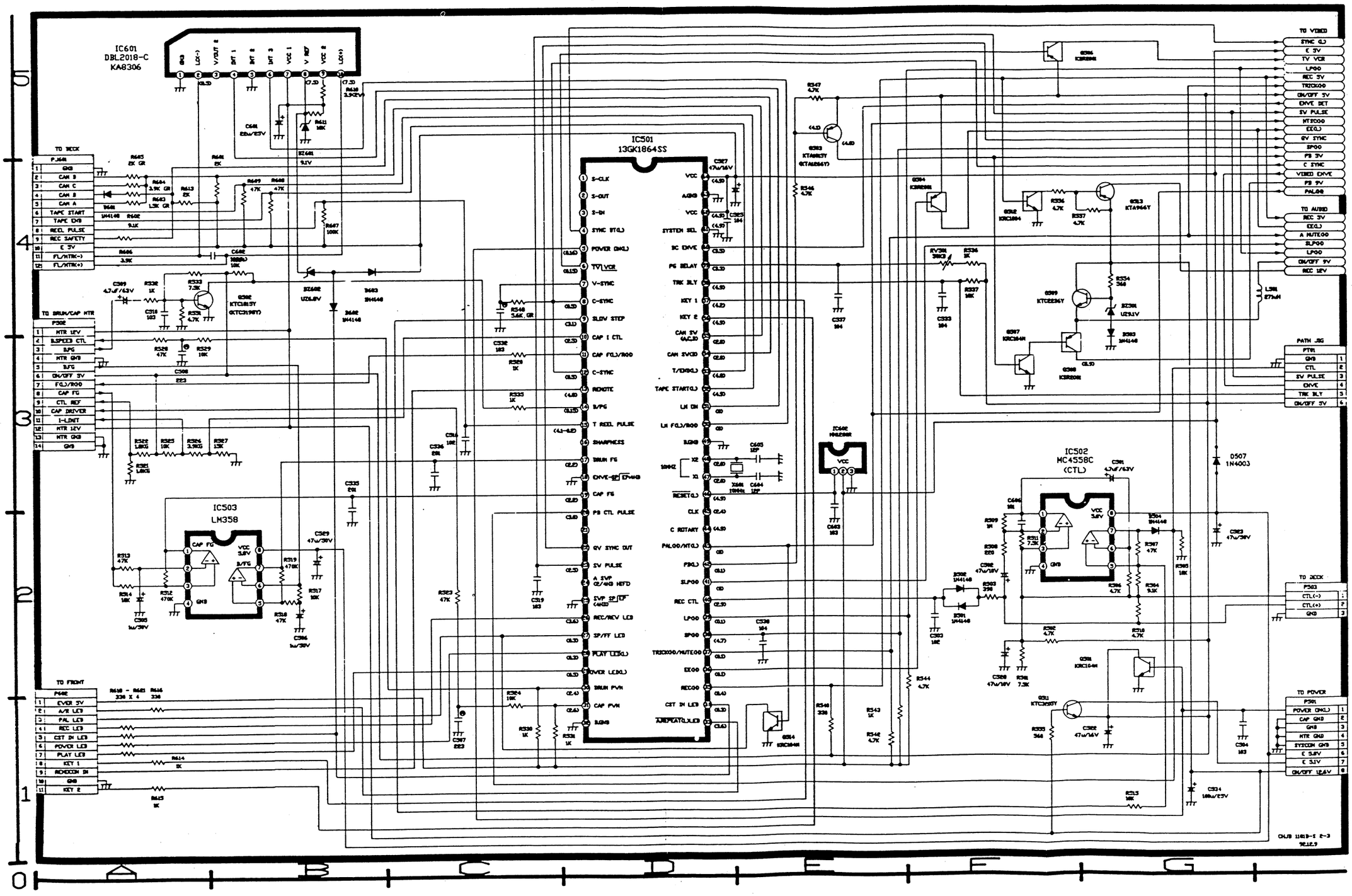
SECTION 3. CIRCUIT DIAGRAM

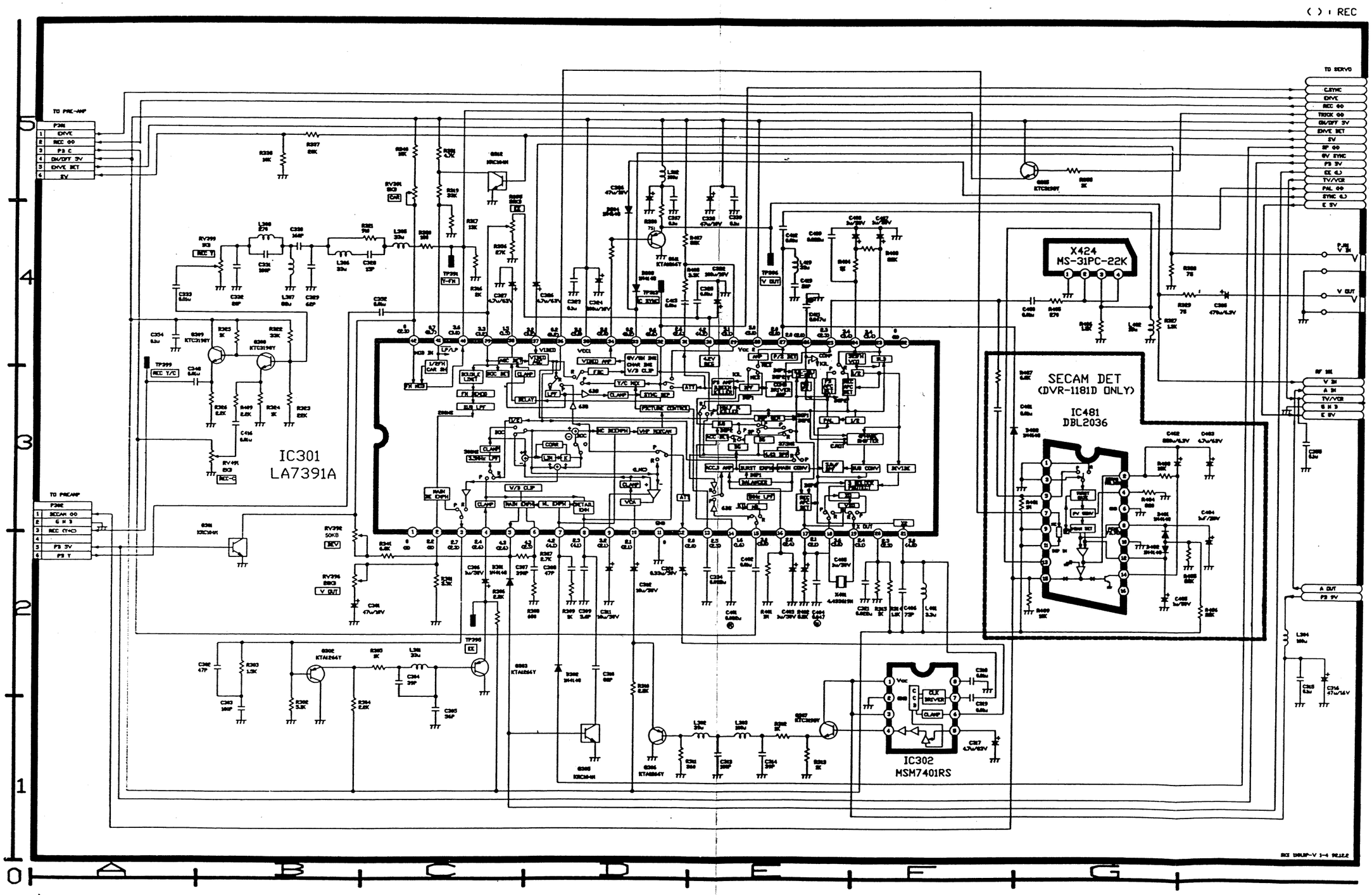
3-1. CONNECTION DIAGRAM




C801
C-LINE ACROSS
250V/104
T801
F802
T2A 250V
C802
103
F801
T500mA 250V
BRN
BLU
F023
240V 50Hz
AC PLUG
L801
LF-302-801
323 130C
THERMAL FUSE
D803
1N4003
D801
1N4003
D804
1N4003
D802
1N4003
C804
3300u/35V
C803
103
D805
1N4003
D807
1N4003
D808
1N4003
D809
1N4003
F804
T2A 250V
DC JACK
12V
F803
1.5A 250V
C805
4700u/25V
(10.1V)
R801
1.5K(1/4W)
R802
120
C815
47u/25V
Q801
KTC2236Y
(KTC3205Y)
C816
47u/25V
DZ801
5.6V
R803
1.2K(1/2W)
R804
120
C818
47u/25V
DZ802
13BM
Q803
2SD1273P
R805
2KG
C807
47u/25V
R806
2KG
(5.6V)
Q809
KSR1001
(0.1V)
R807
4.7K
D806
1N4003
R809
330
C812
47u/16V
TO MAIN
PJ801
POWER ON(L) 1
CAP GND 2
GND 3
MTR GND 4
SYSCON GND 5
PJ802
E 5.8V 1
E 5.1V 2
ON/OFF 12.6V 3
R814
820
R816
200
C819
47u/25V
Q806
KTC2236Y
(KTC3205Y)
C820
47u/25V
DZ803
5.1V
R810
330K(1/4W)
R811
120
DZ804
6.8BM
C813
47u/25V
R813
330G
Q808
2SD1273P
R812
12KG
C811
47u/25V
CAUTION TO THE SERVICE TECHNICIANS: BEFORE RETURNING THE
APPLIANCE TO THE CUSTOMER TO MAKE APPROPRIATE LEAKAGE CURRENT
OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS
ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.
CAUTION: THE PARTS IDENTIFIED BY SHADING OR ⚠ MARK ARE
CRITICAL FOR SAFETY REPLACE ONLY WITH TYPE IDENTICAL TO
THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE 'PART LIST'
DO NOT DEGRADE THE SAFETY OF THE SPPLIANCE THROUGH IMPROPER SERVICE.
CHJB 1181P-PW 3-1 92.12.2

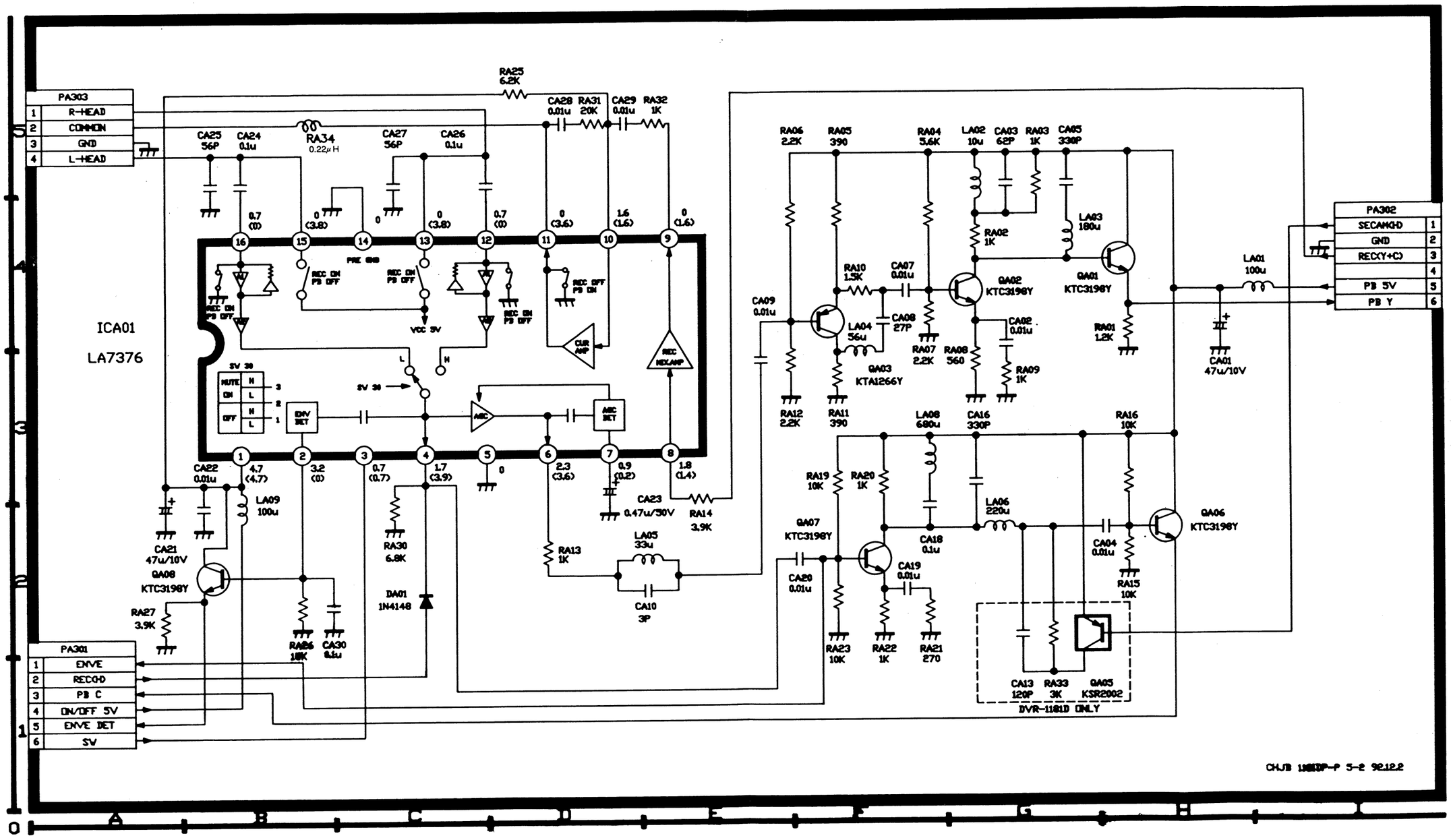
3-3. SERVO/SYSCON CIRCUIT

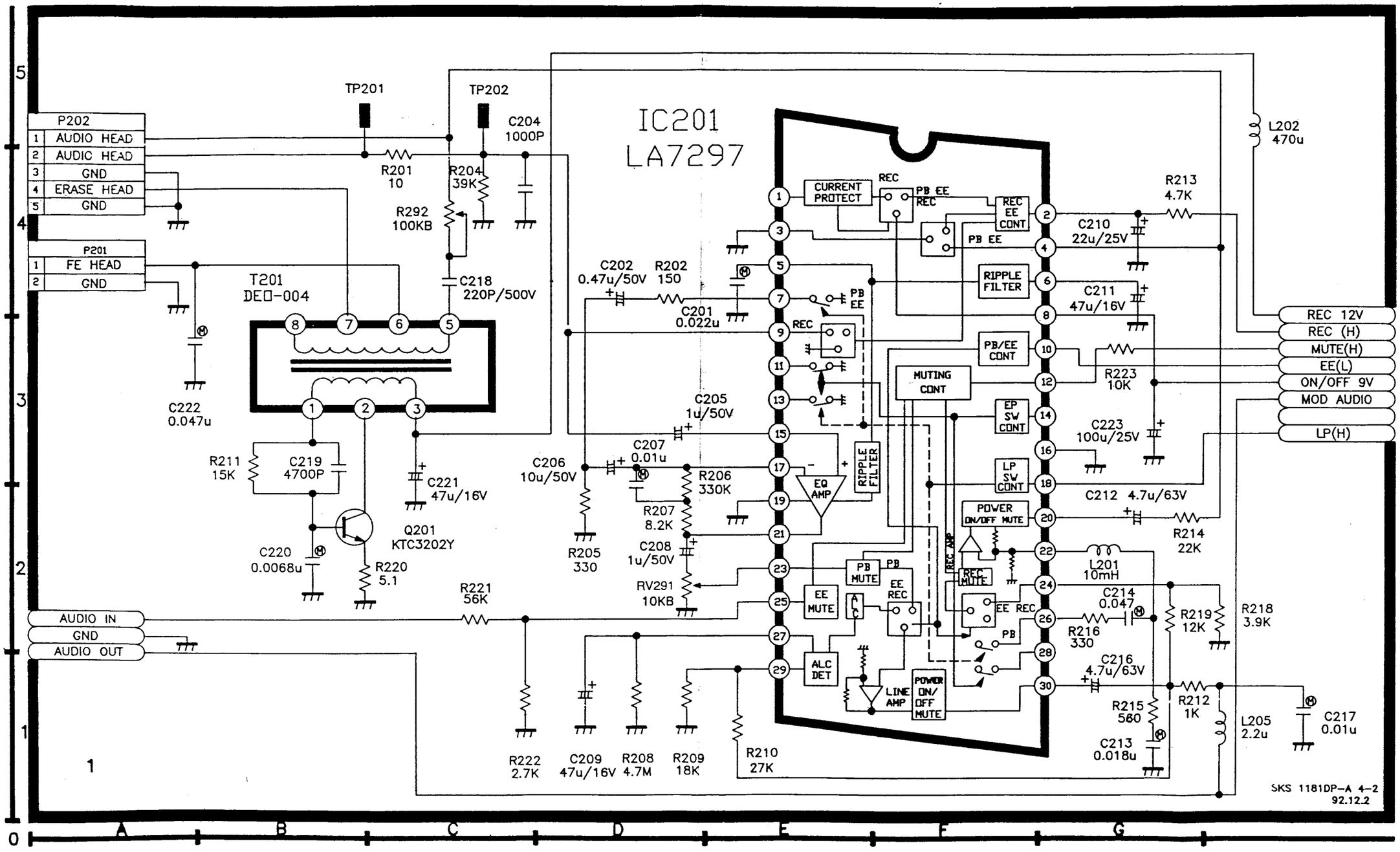



( ) : REC
TO PRE-AMP
TO PREAMP
TO SERVO
IC301
LA7391A
IC302
MSM7401RS
X424
MS-31PC-22K
SECAM DET
(DVR-1181D ONLY)
IC481
DBL2036

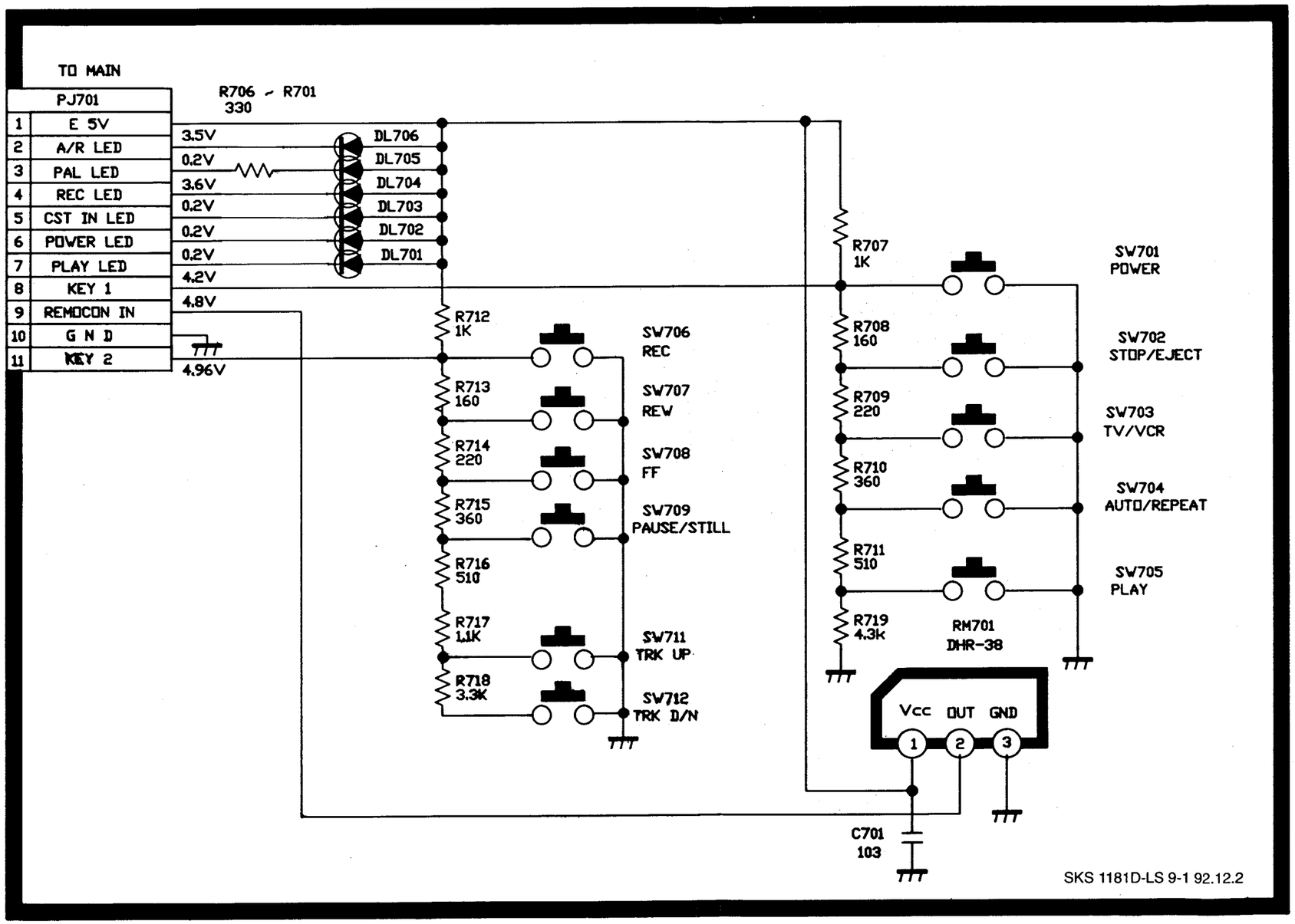
3-5. PRE-AMP CIRCUIT

( ) : REC

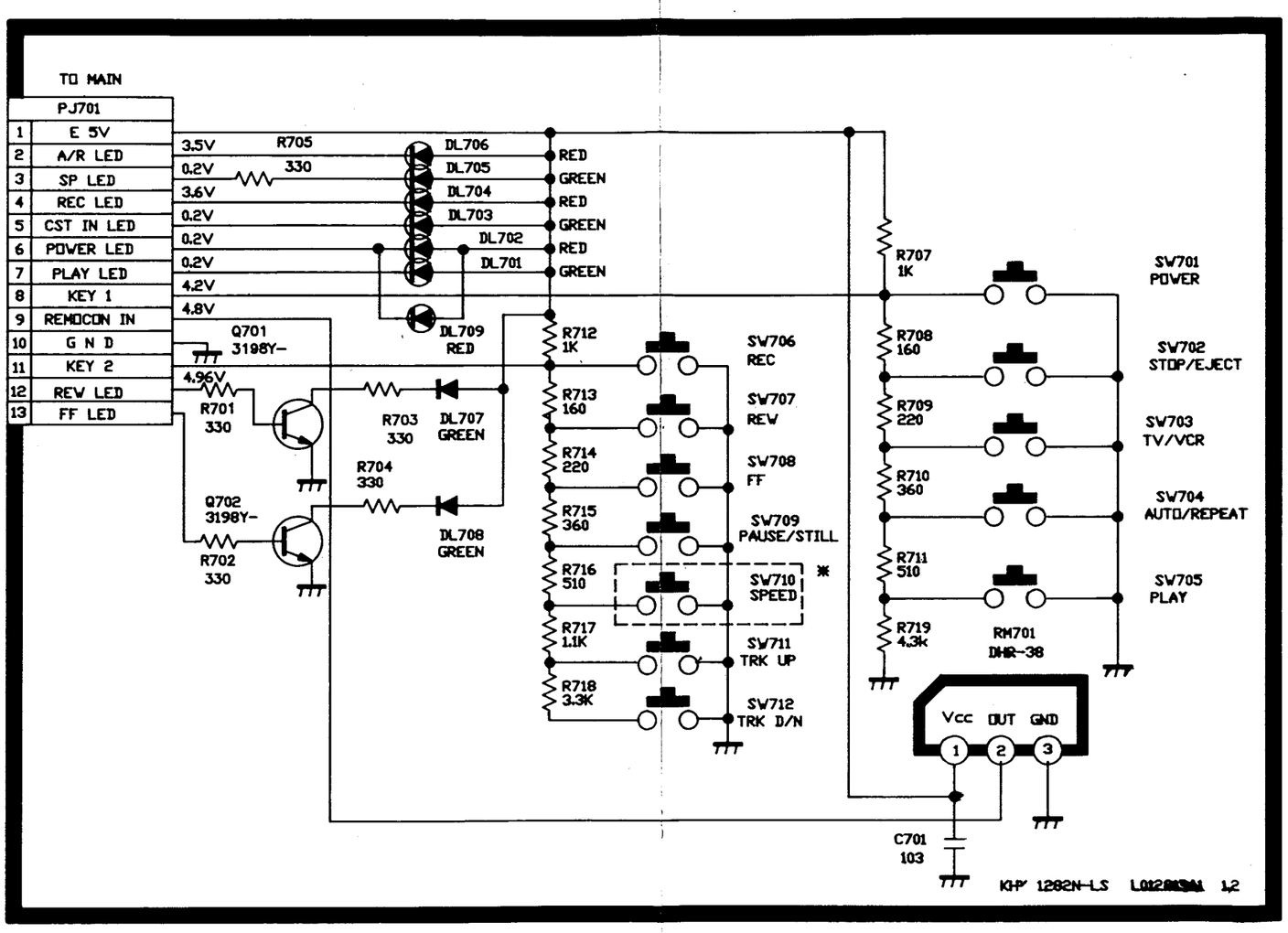



P202
1 AUDIO HEAD
2 AUDIO HEAD
3 GND
4 ERASE HEAD
5 GND
P201
1 FE HEAD
2 GND
AUDIO IN
GND
AUDIO OUT
TP201
TP202
R201 10
R204 39K
R292 100KB
C204 1000P
C218 220P/500V
T201 DE0-004
C222 0.047u
R211 15K
C219 4700P
C221 47u/16V
Q201 KTC3202Y
C220 0.0068u
R220 5.1
R221 56K
C202 0.47u/50V
R202 150
C201 0.022u
C205 1u/50V
C206 10u/50V
C207 0.01u
R206 330K
R207 8.2K
C208 1u/50V
RV291 10KB
R205 330
R222 2.7K
C209 47u/16V
R208 4.7M
R209 18K
R210 27K
IC201
LA7297
CURRENT PROTECT
REC
PB EE
REC
REC EE CONT
PB EE
RIPPLE FILTER
PB/EE CONT
MUTING CONT
EP SW CONT
LP SW CONT
POWER ON/OFF MUTE
REC MUTE
EE MUTE
PB MUTE
EE REC
ALC DET
LINE AMP
POWER ON/OFF MUTE
EQ AMP
RIPPLE FILTER
REC AMP
L202 470u
R213 4.7K
C210 22u/25V
C211 47u/16V
R223 10K
C223 100u/25V
C212 4.7u/63V
R214 22K
L201 10mH
C214 0.047
R216 330
R219 12K
R218 3.9K
C216 4.7u/63V
R215 560
C213 0.018u
R212 1K
L205 2.2u
C217 0.01u
REC 12V
REC (H)
MUTE(H)
EE(L)
ON/OFF 9V
MOD AUDIO
LP(H)
SKS 1181DP-A 4-2
92.12.2

3-7. LOGIC SW CITRCUIT (DVR-1181 SERIES)

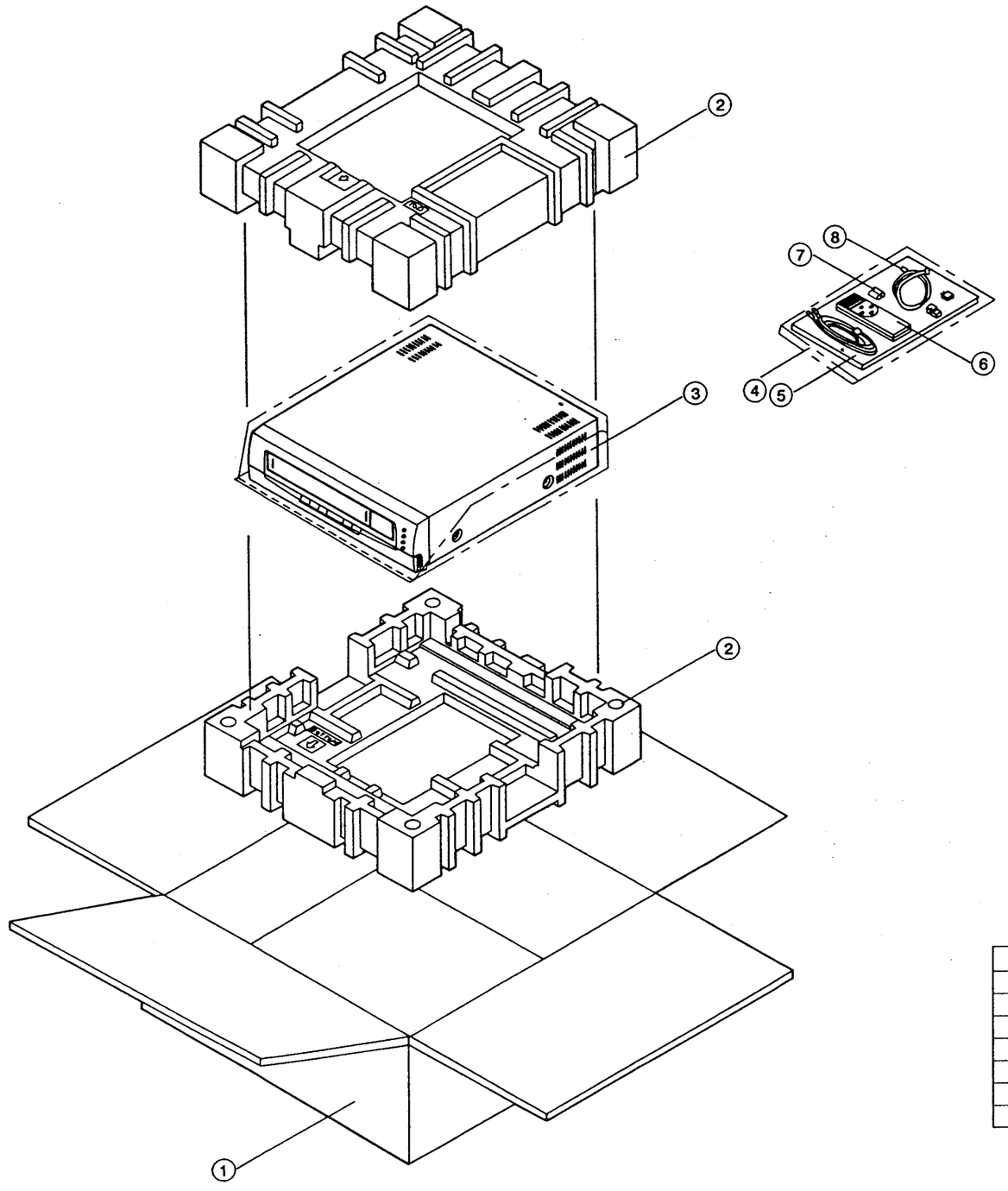


3-8. LOGIC SW CITRCUIT (DVR-1383 SERIES)



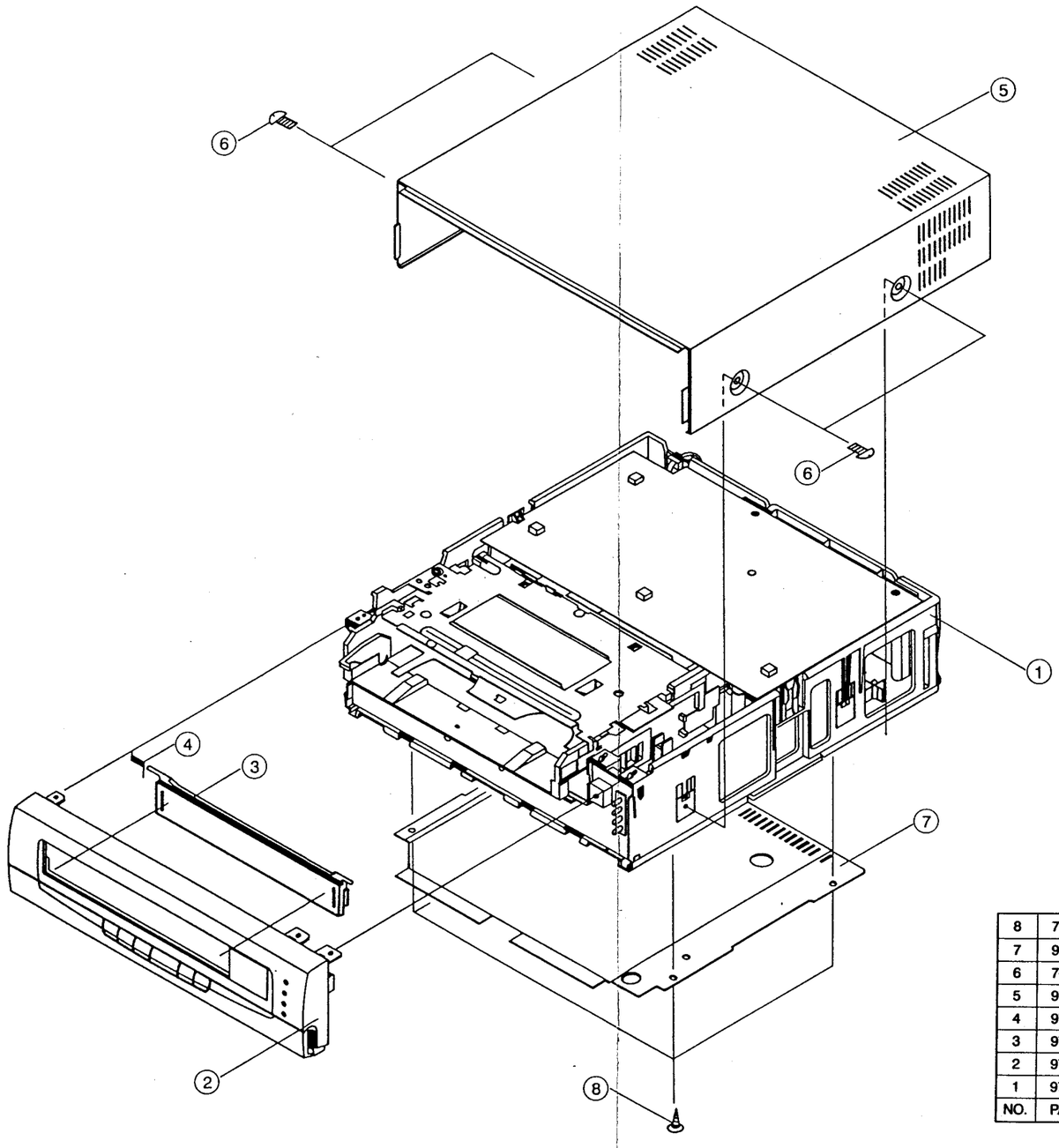
SECTION 4. EXPLODED VIEWS AND PARTS LIST

4-1. PACKING ASSEMBLY



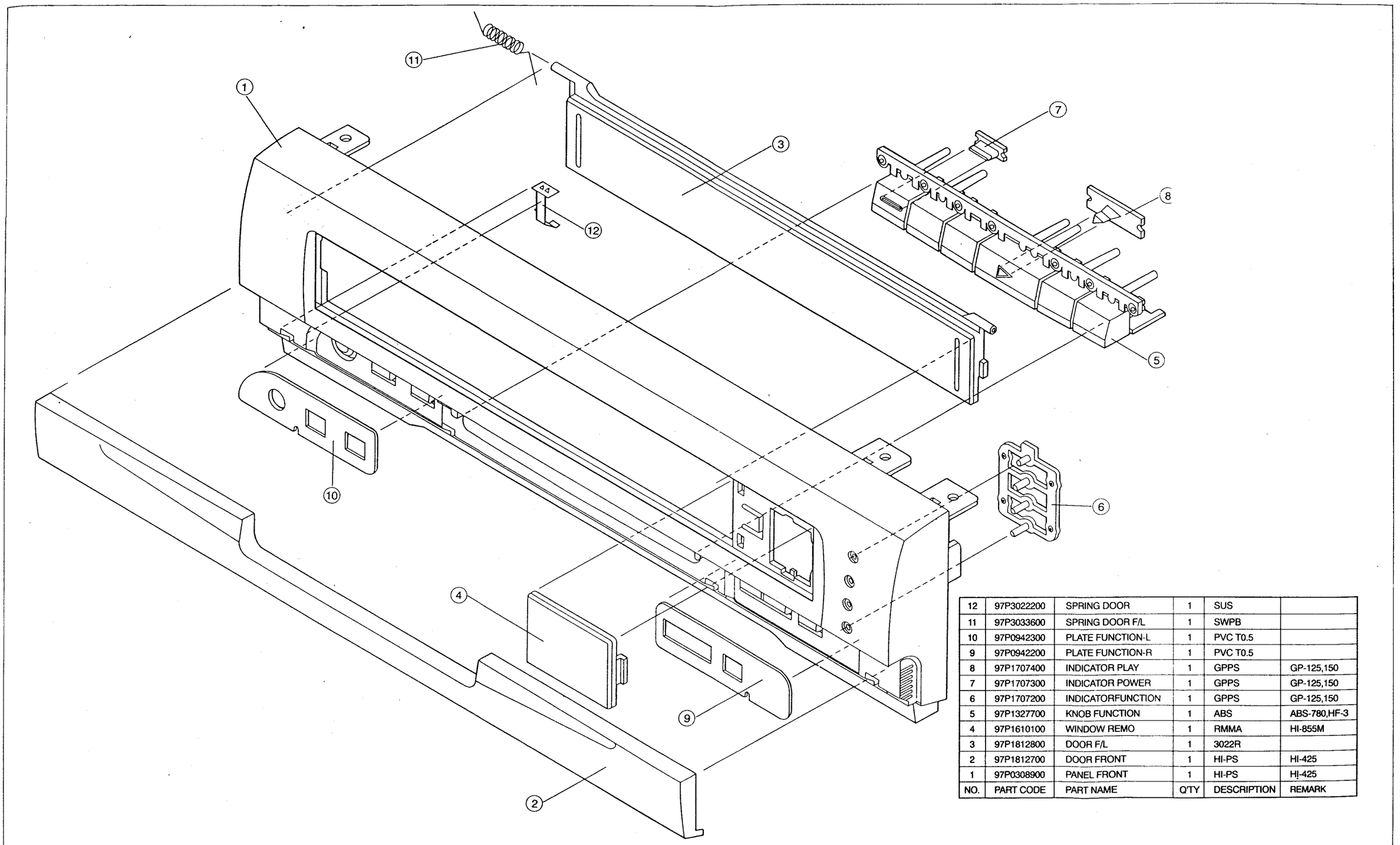
8	97P8804202	CABLE CONNECTOR	1	HP-504(PAL-TYPE)
7	47P7500001	BATTERY	1	AAM 1.5V
6	97P1R30D00	REMOCON HANDSET AS	1	VR-430S/N
5	97P9527502	MANUAL OWNERS	1	ART PARER
4	97P0424100	COVER ACCESSORY		
3	97P4802400	POLY BAG FOR SET	1	HD-PE 0.05
2	97P4915100	PAD TOP/BOTTOM	1	EPS
1	97P5027800	BOX CARTON	1	SW-4

4-2. SET ASSEMBLY



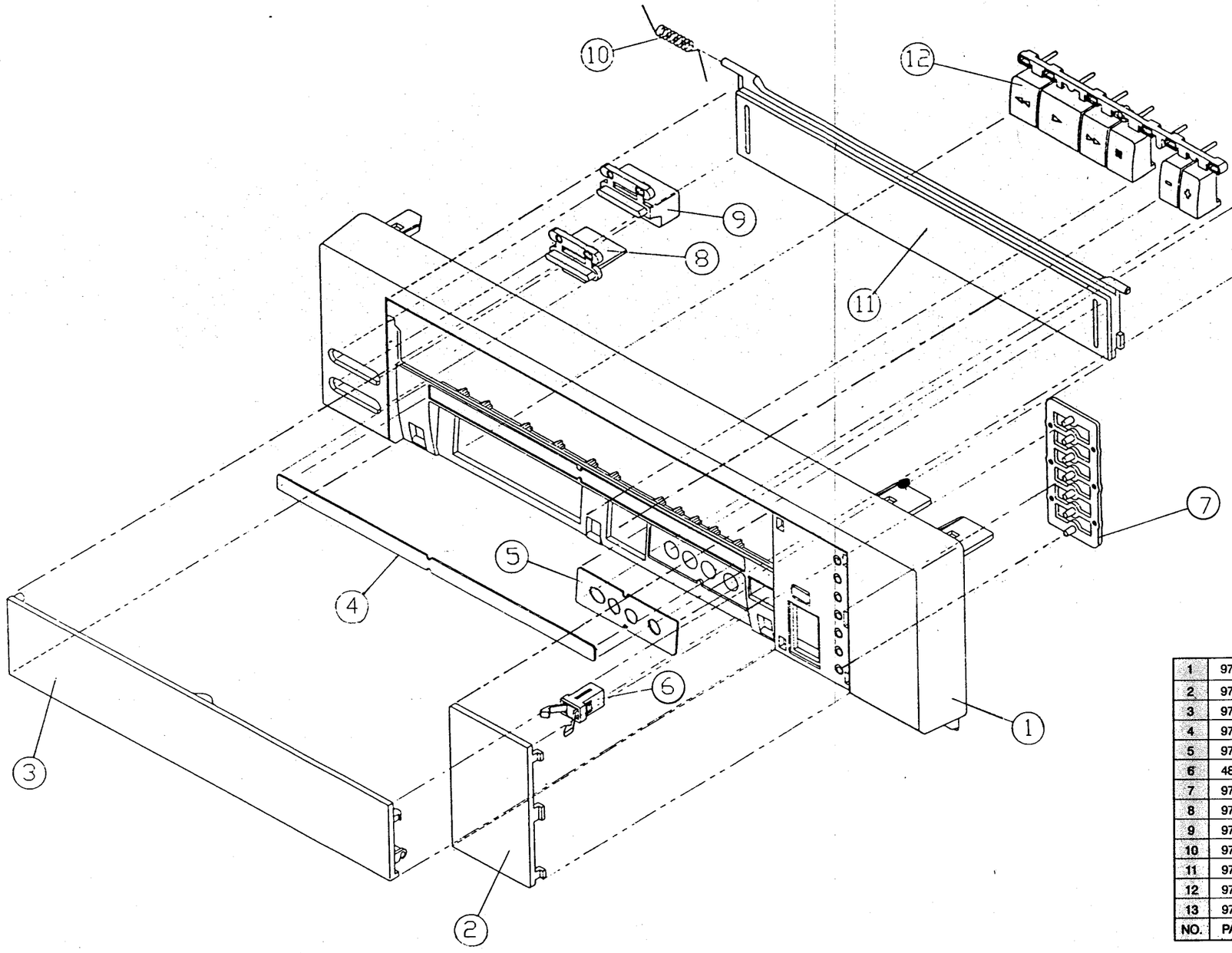
NO.	PART CODE	PART NAME	Q'TY	DESCRIPTION	REMARK
8	7624301211	SCREW TAPPING	5	T2S RND 3×10 MFZN	5 FIX
7	97P0449600	COVER BOTTOM	1	SECC T=0.5	
6	7003400812	SCREW MACHINE	4	BIN 4×8 MFZN BK	4 FIX
5	97P0449500	COVER TOP	1	SECC T=0.7	
4	97P3033600	SPRING F/L DOOR	1	SWPB	
3	97P1812800	DOOR F/L	1	PC	
2	97PB166600	PANEL FRONT AS	1		
1	97PB166500	CHASSIS MAIN AS	1		

4-3. PANEL FRONT ASSEMBLY (DVR-1181 SERIES)



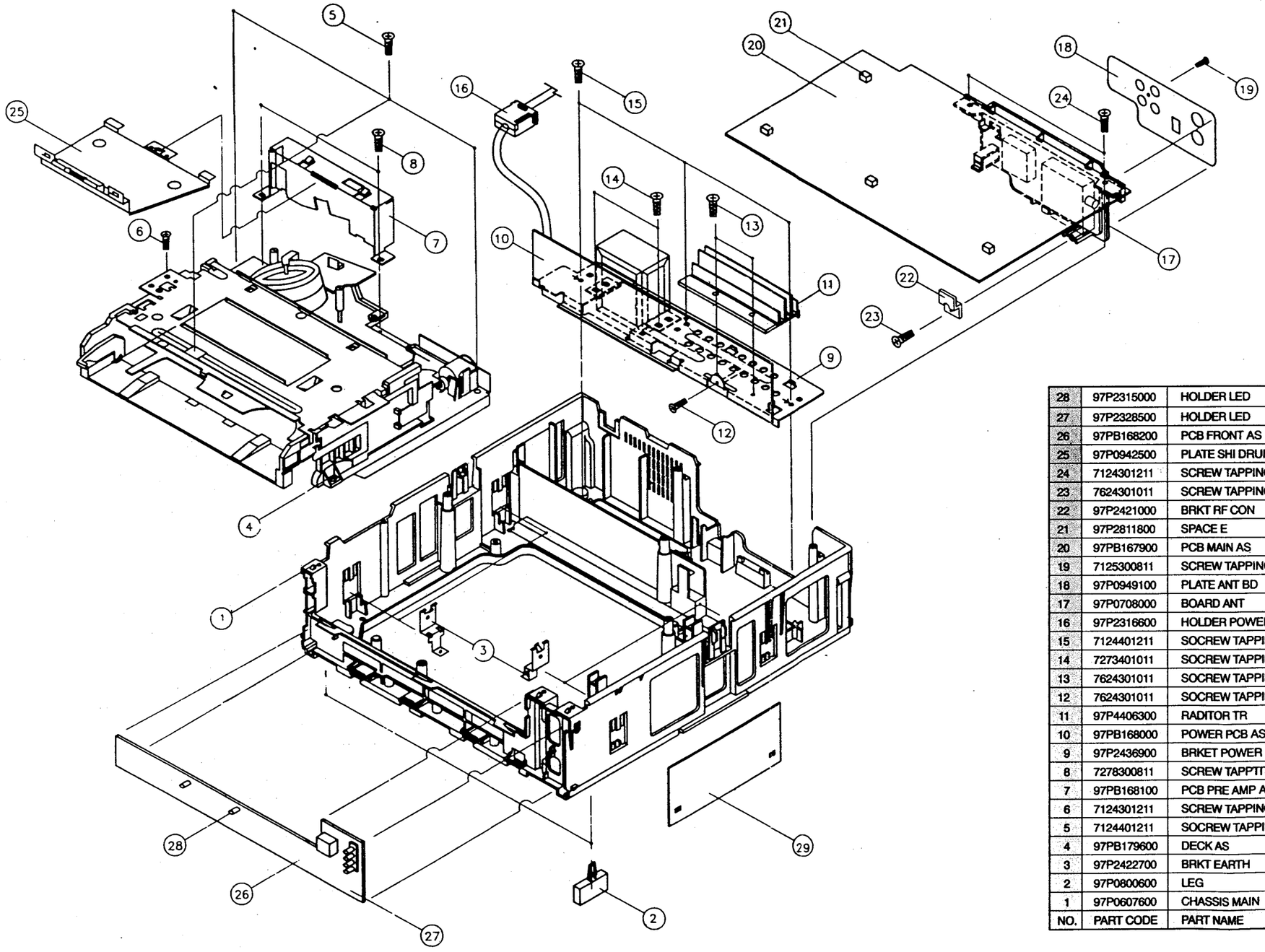
NO.	PART CODE	PART NAME	Q'TY	DESCRIPTION	REMARK
12	97P3022200	SPRING DOOR	1	SUS	
11	97P3033600	SPRING DOOR F/L	1	SWPB	
10	97P0942300	PLATE FUNCTION-L	1	PVC T0.5	
9	97P0942200	PLATE FUNCTION-R	1	PVC T0.5	
8	97P1707400	INDICATOR PLAY	1	GPPS	GP-125,150
7	97P1707300	INDICATOR POWER	1	GPPS	GP-125,150
6	97P1707200	INDICATORFUNCTION	1	GPPS	GP-125,150
5	97P1327700	KNOB FUNCTION	1	ABS	ABS-780,HF-3
4	97P1610100	WINDOW REMO	1	RMMA	HI-855M
3	97P1812800	DOOR F/L	1	3022R	
2	97P1812700	DOOR FRONT	1	HI-PS	HI-425
1	97P0308900	PANEL FRONT	1	HI-PS	HI-425

4-4. PANEL FRONT ASSEMBLY (DVR-1383 SERIES)



NO.	PART CODE	PART NAME	QTY	DESCRIPTION	REMARK
1	97P0310200	PANEL FRONT	1	HI-425	
2	97P1611900	WINDOW FRONT	1	HI-855M	
3	97P1814200	DOOR FRONT	1	HI-425	
4	97P0952100	PLATE FUNCTION-1		T0.5	
5	97P0952200	PLATE FUNCTION-2	1	T0.5	
6	4857920400	DOOR LOCK	1		
7	97P1708100	INDICATOR PLAY	1	GP-125, 150	
8	97P1331000	KNOB STOP/EJECT	1	ABS-780, FH-380	
9	97P1708100	KNOB POWER	1	GP-125, 150	
10	97P3033600	SPRING DOOR F/L	1		
11	97P1813900	DOOR F/L	1	ABS-780, HF-380	
12	97P1331100	KNOB FUNCTION-1	1	ABS-780, HF-380	
13	97P1331200	KNOB FUNCTION-2	1	ABS-780, HF-380	

4-5. MAIN CHASSIS ASSEMBLY



NO.	PART CODE	PART NAME	Q'TY	DESCRIPTION	REMARK
28	97P2315000	HOLDER LED	1	HI-PS	
27	97P2328500	HOLDER LED	1	ABS	
26	97PB168200	PCB FRONT AS	1		
25	97P0942500	PLATE SHI DRUM	1	ET T=0.4	
24	7124301211	SCREW TAPPING	1	T2S RND 3×12 MFZN	20 FIX
23	7624301011	SCREW TAPPING	1	T2S RND 3×12 MFZN	20 FIX
22	97P2421000	BRKT RF CON	1	SECC	T=1.0
21	97P2811800	SPACE E	5	EVA	
20	97PB167900	PCB MAIN AS	1		
19	7125300811	SCREW TAPPING	1	T2S RND 3×8 MFZN	JACK FIX
18	97P0949100	PLATE ANT BD	1	PVC	T=0.5
17	97P0708000	BOARD ANT	1	HI-PS (HB)	
16	97P2316600	HOLDER POWER CORD	1	NYLON66	BLK
15	7124401211	SOCREW TAPPING	3	T2S RND 4×12 MFZN	9 FIX
14	7273401011	SOCREW TAPPING	2	T2S RND 4×12 MFZN	10 FIX
13	7624301011	SOCREW TAPPING	2	T2S RND 3×12 MFZN	11 FIX
12	7624301011	SOCREW TAPPING	1	T2S RND 3×10 MFZN	10 FIX
11	97P4406300	RADITOR TR	1	AL	
10	97PB168000	POWER PCB AS	1		
9	97P2436900	BRKET POWER	1	SECC	T+1.0
8	7278300811	SCREW TAPPTITE	2	TT3 WAS 3×8 MFZN	7 FIX
7	97PB168100	PCB PRE AMP AS	1		
6	7124301211	SCREW TAPPING	1	T2S RND 3×12 MFZN	FIX
5	7124401211	SOCREW TAPPING	3	T2S RND 4×12 MFZN	4 FIX
4	97PB179600	DECK AS	1		
3	97P2422700	BRKT EARTH	4	SECC	T=1.0
2	97P0800600	LEG	2	SVR80	BLK
1	97P0607600	CHASSIS MAIN	1	HI-PS HI-425*HB)	BLK

SECTION 7. ELECTRICAL PART LIST

7.1. ELECTRICAL PART LIST BY ASSEMBLIES

7-1-1. PCB MAIN AS (97PB185200)

LOC	A/J	PART CODE	PART NAME	PART DESC
C201		CMXM2A223J	C MYLAR	100V 0.022 MF J TAPING
C202		CEXE1H478A	C LELCTRO	RS 50V 47MF 5×11
C204		CCZB1H102K	C CERA	HIKB 50V 1000PF K AXIAL
C205		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C206		CEXE1H100A	C ELECTRO	RS 50V 10MF 5×11
C207		CMXM2A103J	CMYLAR	100V 0.01MF J TAPING
C208		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C209		CEXE1C470A	C ELECTRO	RS 16V 47MF 6.3×11
C210		CEXE1E220A	C ELECTRO	RS 25V 22MF 5×11
C211		CEXE1C470A	C ELECTRO	RS 16V 47MF 6.3×11
C212		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C213		CMXM2A183J	C MYLAR	100V 0.018MF J TAPING
C216		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C217		CMXM2A103J	C MYLAR	100V 0.018MF J TAPING
C218		CCXB2H221K	C CERA	HIKB 500V 220PF K TAPING
C219		CBZR1C472M	C CERA	Y5R 16V 4700PF M AXIAL
C220		CMXM2A682J	C MYLAR	100V 6800PF J TAPING
C222		CMXM2A473J	C MYLAR	100V 0.04MF J TAPING
C223		CEXE1E101A	C ELECTRO	RS 25V 100MF 8×11.5
C301		CEXE1A470A	C ELECTRO	RS 10V 47MF 5×11
C302		CXSL1H470J	C CERA	SL 50V 47PF J
C303		CXSL1H470J	C CERA	SL 50V 180PF J
C304		CZSL1H390J	C CERA	SL 50V 39PF J A×IAL
C305		CXSL1H390J	C CERA	SL 50V 56PF J TAPING
C306		CEXE1A109A	C ELECTRO	RS 50V 1MF 5×11
C307		CCZB1H391K	C CERA	HIKB 50V 390PF K A×IAL
C308		CZSL1H470J	C CERA	SL 50V 47PF J A×IAL
C309		CZSL1H569K	C CERA (A×IAL)	SL 50V 82PF J
C310		CXSL1H820J	C CERA	SL 50V 82PF J
C311		CEXE1H100A	C ELECTRO	RS 50V 10MF 5×11
C312		CEXE1H100A	C ELECTRO	RS 50V 10MF 5×11
C313		CEXE1H100A	C CERA	HIKB 50V 100PF K A×IAL
C317		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C318		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C319		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C320		CEXE1H330A	C ELECTRO	RS 50V 0.33MF 5×11
C321		CXSL1E223J	C CERA	Y5V 25V 0.022MF Z A×IAL
C322		CEXE1A101A	C ELECTRO	RS 10V 100MF 6.3×11
C323		CCZF1H104Z	C CERA	HIKF 50V 0.1MF 6.3×11
C324		CEXE1A101A	C ELECTRO	RS 10V 100MF 6.3×11
C325		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C326		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C327		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C328		CZSL1H150J	C CERA	SL 50V 15PF J A×IAL
C329		CXSL1H620J	C CERA	50V SL 62 PF J TAPING
C330		CXSL1H620J	C CERA	SL 50V 160PF J TAPING
C331		CXSL1H620J	C CERA	SL 50V 180PF J

LOC	A/J	PART CODE	PART NAME	PART DESC
C332		CZSL1H200J	C CERA	SL 50V 20PF J A×IAL
C333		CBZP1C103M	C CDER SEMI	Y5S 16V 0.01MF M A×IAL
C334		CBZY1E223Z	C CERA	Y5V 25V 0.022MF Z A×IAL
C335		CEXEO J471A	C EKECTRO	RS 6.3V 470MF 10×12.5
C336		CEXE1A470A	C ELECTRO	RS 10V 47MF 5×11
C337		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
C338		CEXE1A470A	C ELECTRO	RS 10V 47MF 5×11
C339		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
C348		CCZF1H104Z	C CERA SEMI	Y5S 50V 0.1MF M A×AL
C352		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C354		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
C355		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
C401		CMXM2A223J	C MYLAR	100V 0.022MF J TAPING
C402		CBPIC103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C403		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C404		CMXM2A473J	C MYLAR	100V 0.047MF J TAPING
C405		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C406		CXSL1H750J	C CERA	SL 50V 75PF J
C407		CEXE1H109A	CELECTRO	RS 50V 1JMF 5×11
C408		CEXE1H109A	CELECTRO	RS 50V 1JMF 5×11
C409		CBZY1E223Z	C CERA	Y5V 25V 0.022MF Z A×IAL
C411		CMXM2A473J	C MYLAR	100V 0.047MF J TAPING
C412		CBZY1E223Z	C CERA SEMI	Y5V 16V 0.01MF M A×IAL
C415		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C416		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C419		CZSL1H200J	C CERA	SL 50V 20PF J A×IAL
C430		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C431		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
C481		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C482		CEXE0J221A	C ELECTRO	RS 6.3V 220MF 8×11.5
C483		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C484		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C485		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C501		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C502		CXEX1A470A	C ELECTRO	RS 10V 47MF 5×11
C503		CXXF1H102Z	C CERA	HIKF 50V 1000PF Z TAPING
C504		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C505		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C506		CEXE1H109A	C ELECTRO	RS 50V 1MF 5×11
C507		CMXM2A223K	C MYLAR	100V 0.022MF K TAPING
C508		CMXM2A223K	C MYLAR	100V 0.022MF K TAPING
C509		CEXE1J479A	C ELECTRO	RS 63V 4.7MF 5×11
C510		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C516		CCXF1H102Z	C CERA	HIKF 50V 1000PF Z TAPING
C519		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×AL
C522		CEXE1C470A	C ELECTRO	RS 16V 47MF 6.3×11
C523		CCZF1H470A	C ELECTRO	RS 50V 47MF 8×11.5
C525		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
C527		CEXE1C470A	C ELECTRO	RS 16V 47MF 6.3×11
C528		CEXE1A470A	C ELECTRO	RS 10V 47MF 5×11
C534		CEXE1E101A	C ELECTRO	RS 25V 100MF 8×11.5

LOC	A/J	PART CODE	PART NAME	PART DESC
C529		CCZF1H470A	C ELECTRO	RS 50V 47MF 8×11.5
C532		CMXM2A103K	C MYLAR	100V .01MF K TAPING
C533		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
C535		CXSL1H201J	C CERA	HIKF 50V 0.1MF Z A×IAL
C537		CBZP1C104M	C CERA SEMI	Y5S 16V 0.1MF M A×IAL
C538		CBZP1C104M	C CERA SEMI	Y5S 16V 0.1MF M A×IAL
C539		CBZP1C104M	C CERA SEMI	Y5S 16V 0.1MF M A×IAL
C541		CBZP1C104M	C CERA SEMI	Y5S 16V 0.1MF M A×IAL
C547		CBZP1C104M	C CERA SEMI	Y5S 16V 0.1MF M A×IAL
C549		CBZP1C104M	C CERA SEMI	Y5S 16V 0.1MF M A×IAL
C601		CEXE1E220A	C ELECTRP	RS 25V 22MF 5×11
C602		CBZP1C103M	C CER SEMI	Y5S 16V 0.01MF M A×IAL
C603		CBZP1C103M	C CER SEMI	Y5S 16V 0.01MF M A×IAL
C604		CZSL1H120J	C CERA	SL 50V 12PF J A×IAL
C605		CZSL1H120J	C CERA	SL 50V 12PF J A×IAL
C606		CCZB1H101K	C CERA	HIKF 50V 1000PF K A×IAL
DZ501		DZZ9R1BM--	DIODE ZENER	UZ-9.1BM AUTO
DZ601		DZZ9R1BM--	DIODE ZENER	UZ-9.1BM AUTO
DZ602		DZZ9R1BM--	DIODE ZENER	UZ-9.1BM AUTO
D301		DZN4148---	DIODE	1N4148 AUTO 52MM
D302		DZN4148---	DIODE	1N4148 AUTO 52MM
D303		DZN4148---	DIODE	1N4148 AUTO 52MM
D304		DZN4148---	DIODE	1N4148 AUTO 52MM
D481		DZN4148---	DIODE	1N4148 AUTO 52MM
D482		DZN4148---	DIODE	1N4148 AUTO 52MM
D483		DZN4148---	DIODE	1N4148 AUTO 52MM
D501		DZN4148---	DIODE	1N4148 AUTO 52MM
D502		DZN4148---	DIODE	1N4148 AUTO 52MM
D503		DZN4148---	DIODE	1N4148 AUTO 52MM
D504		DZN4148---	DIODE	1N4148 AUTO 52MM
D507		DZN4148---	DIODE	1N4148 AUTO 52MM
D601		DZN4148---	DIODE	1N4148 AUTO 52MM
D602		DZN4148---	DIODE	1N4148 AUTO 52MM
D603		DZN4148---	DIODE	1N4148 AUTO 52MM
IC201		1LA7391A--	IC VIDEO	LA7391A
IC301		1MSM7401RS	IC	MSM7401RS
IC481		1DBL2036--	IC VIDEO	DBL2036
IC501		13GK1864SS	IC MICOM	13GK1864SS
IC502		1MC4558C--	IC OP AMP	MC4558C
IC503		1DBL358---	IC	DBL358 DUAL OP-AMP
IC601		1DBL2018C-	IC DRIVER	DBL2018-C
IC602		1MN1280R--	IC	MN1280R
L201		5CPX103J--	COIL PEAKING	10MH 5MM J RADIAL
L202		5CPX471J--	COIL PEAKING	470UN J RADIAL
L203		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
L205		5CPZ229M02	COIL PEAKING	2.2UH 3.5MM M (LAL02TB)
L301		5CPZ330M02	COIL PEAKING	33UH 3.5MM K (LAL02TB)
L303		5CPZ101K02	COIL PEAKING	100UH 3.5MM K (LAL02TB)
L304		5CPZ101K02	COIL PEAKING	100UH 3.5MM K (LAL02TB)
L305		5CPZ330K02	COIL PEAKING	33UH 3.5MM K (LAL02TB)
L306		5CPZ330K02	COIL PEAKING	33UH 3.5MM K (LAL02TB)

LOC	A/J	PART CODE	PART NAME	PART DESC
L308		5CPX271J--	COIL PEAKING	270UH J RADIAL
L312		5CPZ101K02	COIL PEAKING	100UH 3.5MM K (LAL02TB)
L401		5CPZ330K02	COIL PEAKING	33UH 3.5MM K (LAL02TB)
L402		5CPZ150K02	COIL PEAKING	15UH 3.5MM K (LAL02TB)
L419		5CPZ330K02	COIL PEAKING	33UH 3.5MM K (LAL02TB)
L501		5CPX271J--	COIL PEAKING	270UH J RADIAL
Q201		TZTC3202Y-	TR	KTC3202Y (AUDIO) (1959Y)
Q301		TZRC104M--	TR	KRC104M AUTO
Q302		TZTA1266Y-	TR	KTA1266Y- (AUTO) (1015Y)
Q303		TZTA1266Y-	TR	KTA1266Y- (AUTO) (1015Y)
Q305		TZRC104M--	TR	KRC104M AUTO
Q306		TZTA1266Y-	TR	KTA1266Y- (AUTO) (1015Y)
Q307		TZTC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q308		TZTC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q309		TZTC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q311		TZTA1266Y-	TR	KTA1266Y- (AUTO) (1015Y)
Q312		TZRC104M--	TR	KRC104M AUTO
Q315		TZTC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q501		TZRC104M--	TR	KRC104M AUTO
Q502		TZTC3198Y-	TR	KTC3198Y- (1815Y) (AUTO)
Q503		TZTA1266Y-	TR	KTA1266Y- (AUTO) (1015Y)
Q504		TZSR2001--	TR	KSR2001 (AUTO)
Q506		TZSR2001--	TR	KSR2001 (AUTO)
Q507		TZRC104M--	TR	KRC104M AUTO
Q508		TZSR2001--	TR	KSR2001 (AUTO)
Q509		TZTC3205Y-	TR	KSR2001 (AUTO)
	A	TZSC2328AY	TR	KSC2328A-Y (AUTO)
Q511		TZTC3205Y-	TR	KSR2001 (AUTO)
	A	TZSC2328AY	TR	KSC2328A-Y (AUTO)
Q512		TZRC104M--	TR	KRC104M AUTO
Q513		TZTA1273Y-	TR	KTA1273Y(966Y)
Q514		TZRC104M--	TR	KRC104M AUTO
RF101		97P7206400	MODULATOR RF	MCB8-UG3621
RV291		RV5426103E	R SEMI FIXED	H10K-5×3-6Y-PC-GS
RV292		RV5426103E	R SEMI FIXED	H10K-5×3-6Y-PC-GS
RV391		RV5426203E	R SEMI FIXED	RH 0638C-20K OHM
RV392		RV5426203E	R SEMI FIXED	RH 0638C-20K OHM
RV395		RV5426203E	R SEMI FIXED	RH 0638C-20K OHM
RV396		RV5426203E	R SEMI FIXED	RH 0638C-20K OHM
RV399		RV5426102E	R SEMI FIXED	H10K-5×3-6Y-PC-GS
RV491		RV5426203E	R SEMI FIXED	RH 0638C-20K OHM
RV501		RV5426203E	R SEMI FIXED	RH 0638C-20K OHM
R201		RD-AZ100J-	R CARBON FILM	1/6 10 OHM J
R202		RD-AZ151J-	R CARBON FILM	1/6 150 OHM J
R204		RD-AZ393J-	R CARBON FILM	1/6 39K OHM J
R205		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R206		RD-AZ334J-	R CARBON FILM	1/6 330K OHM J
R207		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J
R208		RD-AZ475J-	R CARBON FILM	1/6 4.7M OHM J
R209		RD-AZ183J-	R CARBON FILM	1/6 18K OHM J
R210		RD-AZ273J-	R CARBON FILM	1/6 27K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R211		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R213		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R214		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R215		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R218		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R219		RD-AZ123J-	R CARBON FILM	1/6 12K OHM J
R220		RD-AZ519J-	R CARBON FILM	1/6 5.1 OHM J
R221		RD-AZ563J-	R CARBON FILM	1/6 56K OHM J
R222		RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J
R223		RD-AZ103J-	R CARBON FILM	1/6 1K OHM J
R225		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
R301		RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J
R302		RD-AZ512J-	R CARBON FILM	1/6 5.1K OHM J
R303		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
R304		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R305		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R306		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R307		RD-AZ272J-	R CARBON FILM	1/6 2.7K OHM J
R308		RD-AZ681J-	R CARBON FILM	1/6 680 OHM J
R309		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R310		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R311		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R312		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R313		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R314		RD-AZ112J-	R CARBON FILM	1/6 1.1K OHM J
R315		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R316		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R317		RD-AZ113J-	R CARBON FILM	1/6 13K OHM J
R319		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R320		RD-AZ181J-	R CARBON FILM	1/6 180 OHM J
R321		RD-AZ911J-	R CARBON FILM	1/6 910 OHM J
R322		RD-AZ333J-	R CARBON FILM	1/6 33K OHM J
R323		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R324		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R325		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R326		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R327		RD-AZ132J-	R CARBON FILM	1/6 1.3K OHM J
R328		RD-AZ750J-	R CARBON FILM	1/6 75 OHM J
R329		RD-AZ750J-	R CARBON FILM	1/6 75 OHM J
R330		RD-AZ750J-	R CARBON FILM	1/6 75 OHM J
R331		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R337		RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
R338		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R353		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R356		RD-AZ273J-	R CARBON FILM	1/6 27K OHM J
R401		RD-AZ105J-	R CARBON FILM	1/6 27K OHM J
R402		RD-AZ822J-	R CARBON FILM	1/6 8.2K OHM J
R403		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R404		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R405		RD-AZ271J-	R CARBON FILM	1/6 270 OHM J
R406		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R407		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R408		RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J
R409		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
R421		85801065GY	WIRE COPPER	AWG22 1/0.65 TIN COATING
R481		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R484		RD-AZ821J-	R CARBON FILM	1/6 18K OHM J
R485		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R486		RD-AZ223J-	R CARBON FILM	1/6 22K OHM J
R487		RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
R489		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R501		RD-AZ752J-	R CARBON FILM	1/6 7.5K OHM J
R502		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R503		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
R504		RD-AZ912J-	R CARBON FILM	1/6 9.1K OHM J
R505		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R506		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R507		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R508		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R509		RD-AZ105J-	R CARBON FILM	1/6 1M OHM J
R510		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R511		RD-AZ752J-	R CARBON FILM	1/6 7.5K OHM J
R512		RD-AZ474J-	R CARBON FILM	1/6 470 OHM J
R513		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R514		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R516		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R517		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R518		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R519		RD-AZ474J-	R CARBON FILM	1/6 470K OHM J
R520		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R521		RD-AZ182G-	R CARBON FILM	1/6 1.8K OHM J
R522		RD-AZ182G-	R CARBON FILM	1/6 1.8K OHM J
R523		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R524		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R525		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R526		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R527		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
R528		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R529		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R530		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R531		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R532		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R533		RD-AZ752J-	R CARBON FILM	1/6 7.5K OHM J
R534		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R535		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R536		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R537		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R540		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R542		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R543		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R544		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R546		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R547		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R548		RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
R551		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R554		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R555		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
R556		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R557		RD-AZ472J-	R CARBON FILM	1/6 4.7K OHM J
R601		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R602		RD-AZ912J-	R CARBON FILM	1/6 9.1K OHM J
R603		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
R604		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R605		RD-AZ202J-	R CARBON FILM	1/6 2K OHM J
R606		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
R607		RD-AZ104J-	R CARBON FILM	1/6 100K OHM J
R608		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R609		RD-AZ473J-	R CARBON FILM	1/6 47K OHM J
R610		RD-AZ399J-	R CARBON FILM	1/6 3.9K OHM J
R611		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
R613		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R614		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R615		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
T201		5604020001	COIL BIAS OSC	DEO-004
U301		97P6541203	PCB MAIN	284×170×1.6T(1080)
X401		5XE4R4336B	CRYSTAL QUARTZ	HC-49/U 4.433619MHZ 15PPM
X424		97P7002500	DELAY LINE	2H COMB MS-31PC-22K

7-1-2 PCB POWER AS (97B185300)

LOC	A/J	PART CODE	PART NAME	PART DESC
C801		CLYL2E104M	C LINE	ACROSS 250V 0.1MF M S,O,V
C802		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C803		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
C804		CEXF1V103M	C ELECTRO	RSS 35V 3300MF 18×35.5
C805		CEXE1E472A	C ELECTRO	RS 25V 4700MF 22×40
C807		CEXE1E470A	C ELECTRO	RS 25V 47MF 6.3×11
C811		CEXE1E470A	C ELECTRO	RS 25V 47MF 6.3×11
C812		CEXE1E470A	C ELECTRO	RS 25V 47MF 6.3×11
DZ803		DZA105R1L-	DIODE ZENER	MA 1051L (5R1)
DZ804		DZZ6R88M--	DIODE ZENER	UZ-6.88M AUTO
D802		D1N4003---	DIODE	1N4003
D803		D1N4003---	DIODE	1N4003
D804		D1N4003---	DIODE	1N4003
D805		D1N4003---	DIODE	1N4003
D806		D1N4003---	DIODE	1N4003
D807		D1N4003---	DIODE	1N4003
D807		D1N4003---	DIODE	1N4003
D808		D1N4003---	DIODE	1N4003
D809		D1N4003---	DIODE	1N4003
ET01		8-UH033OBK	TUBE SHRINK	AWG8 D=3.3MM BK UL
ET02		8-UH033OBK	TUBE SHRINK	AWG8 D=3.3MM BK UL
F023		97P6901111	CORD POWER AS	KKP-419C-BSP3-1/2HT002
P0A		4859901111	CORD POWER	KKP-419C KLGE-2F (2.1ME)
P0B		4857416500	TERM MALE W/MTD	BSP3-1/2H T02 SN-3
F801		5F2GB5012L	FUSE GLASS TUBE	BS/VDE TL 500MA 250V MF51
F801A		97P460160P	CLIP FUSE	PFC5000-0202
F801B		97P460160P	CLIP FUSE	PFC5000-0202
F802		5FSGB2022L	FUSE GLASS TUBE	SEMKO TL 2A 250V MF51
F802A		97P460160P	CLIP FUSE	PFC5000-0202
F802B		97P460160P	CLIP FUSE	PFC5000-0202
F803		5FSGB2022L	FUSE GLASS TUBE	SEMKO TL 2A 250V MF51
F803A		97P460160P	CLIP FUSE	PFC5000-0202
F803B		97P460160P	CLIP FUSE	PFC5000-0202
F804		5FSGB2022L	FUSE GLASS TUBE	SEMKO TL 2A 250V MF51
F804A		97P460160P	CLIP FUSE	PFC5000-0202
F804B		97P460160P	CLIP FUSE	PFC5000-0202
JA801		97P6304700	JACK DC	HECO749-01-010
L801		5PLF302---	FILTER LINE	LF-302-801
Q801		TZTC3205Y-	TR ROUTE	KTC3205Y (2236Y)
	A	TZSC2328AY	TR	KSC2328A-Y(AUTO)
Q803		T2SD1273P-	TE	CSD1273-P
J010		2SD1273P		
Q806		T2SD1273P-	TR	OUTE KTC3205Y (2236Y)
Q808		T2SD1273P-	TE	CSD1273-P
J010		2SD1273P		
Q809		TZSR1001--	TR	KSR1001 (AUTO)

LOC	A/J	PART CODE	PART NAME	PART DESC
R8011		RD-4Z152J-		R CARBON FILM 1/4 150K OHM J
		ROUTE		
				SE041/4 150K OHM J
				SE11 1.5K OHM J 1/4
R8022		RD-4Z121J-	R CARBON FILM	1/4 120 OHM J
G005		5043CX120ROJ		
		SE11		1/4 120 OHM J
R8033		RD-2Z122J-	R CARBON FILM	1/2 1.2K OHM J
R8044		RD-4Z121J-	R CARBON FILM	1/4 120 OHM J
		ROUTE		
R8055		RD-AZ202G-	R CARBON FILM	1/6 2K OHM J
		ROUTE		
R8066		RD-AZ222G-	R CARBON FILM	1/6 2.2K OHM J
		ROUTE		
R8077		RD-AZ472G-	R CARBON FILM	1/6 4.7K OHM J
		ROUTE		
R8099		RD-AZ331G-	R CARBON FILM	1/6 330 OHM J
		ROUTE		
R8100		RD-AZ331G-	R CARBON FILM	1/6 330 OHM J
		ROUTE		
				SE041/4W 330 OHM J
				SE11330 OHM J 1/4W
R811		RD-AZ121G-	R CARBON FILM	1/6 120 OHM J
		ROUTE		
R812		RD-AZ123G-	R CARBON FILM	1/6 12K OHM J
		ROUTE		
R813		RD-AZ331G-	R CARBON FILM	1/6 330 OHM J
		ROUTE		
R814		RD-AZ821G-	R CARBON FILM	1/6 820 OHM J
		ROUTE		
R816		RD-AZ201G-	R CARBON FILM	1/6 200 OHM J
		ROUTE		
T801		57P2057154	TRANS POWER	TPW-1181D
		ROUTE		
U801		97P6541202	PCB POWER	266.5×246×1.6T(1181D)

7-1-3. PCB PRE-AMPAS (97PB185400)

LOC	A/J	PART CODE	PART NAME	PART DESC
CA01		CEXE1A470A	C CELECTRO	RS 10V 47MF 5×11
CA02		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA03		CXSL1H620J	C CERA	50V SL 62PF J TAPING
CA04		CBZPI1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA05		CCZB1H331K	C CERA	HIKB 50V 330PF K A×IAL
CA07		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA08		CZSL1H270J	C CERA	SL 50V 27PF J A×IAL
CA09		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA10		CXSL1H309C	C CERA	SL 50V 3PF C
CA13		CCZB1H331K	C CERA	HIKB 50V 330PF K A×IAL
CA16		CXSL1H331J	C CERA	50V SL 330PF J TAPING
CA18		CCZB1H331K	C CERA	HIKB 50V 330PF K A×IAL
CA19		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA20		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA21		CEXE1A470A	V CELECTRO	RS 10V 47MF 5×11
CA22		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA23		CEXE1H487A	C CELECTRO	RS 50V 0.47MF 5×11
CA24		CCZF1H104Z	C CERA	HIKF 50V 0.1MF Z A×IAL
CA25		CXCH1H560J	C CERA	CH 50V 56PF J TAPING
CA26		CCZB1H331K	C CERA	HIKB 50V 330PF K A×IAL
CA27		CXCH1H560J	C CERA	CH 50V 56PF J TAPING
CA28		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA29		CBZP1C103M	C CERA SEMI	Y5S 16 0.01MF M A×IAL
CA30		CCZB1H331K	C CERA	HIKB 50V 330PF K A×IAL
CA01		DZN4148---	DIODE	1N4148 AUTO 52MM
ICA01		1LA7376---	IC VIDEO	LA7376 (PREAMP)
LA01		5CPZ101K02	COIL PEARING	100UH 3.5MM K (LAL02TB)
			ROUTE	
LA02		5CPZ100K02	COIL PEARING	10UH 3.5MM K (LAL02TB)
			ROUTE	
LA03		5CPZ181K02	COIL PEARING	180UH 3.5MM K (LAL02TB)
			ROUTE	
LA04		5CPZ560K02	COIL PEARING	56UH 3.5MM K (LAL02TB)
			ROUTE	
LA05		5CPZ330K02	COIL PEARING	33UH 3.5MM K (LAL02TB)
			ROUTE	
LA06		5CPX221J--	COIL PEAKING	220UH J RADIAL
			ROUTE	
LA08		5CPX681J--	COIL PEAKING	680UH 5MM J RADIAL
			ROUTE	
LA09		5CPZ101K02	COIL PEARING	100UH 3.5MM K (LAL02TB)
			ROUTE	
QA01		TZTC3198Y-	TR	KTC3198Y-(1815Y0 (AUTO)
QA02		TZTC3198Y-	TR	KTC3198Y-(1815Y0 (AUTO)
QA03		TZTA1266Y-	TR	KTA1266Y- (AUTO) (1015Y)
QA05		TZST2002--	TR	KSR2002 (AUTO)
R536		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R537		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J

LOC	A/J	PART CODE	PART NAME	PART DESC
R540		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
QA06		TZTC3198Y-	TR	KTC3198Y-(1815Y0 (AUTO)
QA07		TZTC3198Y-	TR	KTC3198Y-(1815Y0 (AUTO)
QA08		TZTC3198Y-	TR	KTC3198Y-(1815Y0 (AUTO)
RA01		RD-AZ122J-	R CARBON FILM	1/6 1.2K OHM J
RA02		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA03		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA04		RD-AZ562J-	R CARBON FILM	1/6 5.6K OHM J
RA05		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
RA06		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
RA07		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
RA08		RD-AZ561J-	R CARBON FILM	1/6 560 OHM J
RA09		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA10		RD-AZ152J-	R CARBON FILM	1/6 1.5K OHM J
RA11		RD-AZ391J-	R CARBON FILM	1/6 390 OHM J
RA12		RD-AZ222J-	R CARBON FILM	1/6 2.2K OHM J
RA13		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA14		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
RA15		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RA16		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RA19		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RA20		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA21		RD-AZ271J-	R CARBON FILM	1/6 270 OHM J
RA22		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA23		RD-AZ103J-	R CARBON FILM	1/6 10K OHM J
RA25		RD-AZ622J-	R CARBON FILM	1/6 6.2K OHM J
RA26		RD-AZ153J-	R CARBON FILM	1/6 15K OHM J
RA27		RD-AZ392J-	R CARBON FILM	1/6 3.9K OHM J
RA30		RD-AZ682J-	R CARBON FILM	1/6 6.8K OHM J
RA31		RD-AZ203J-	R CARBON FILM	1/6 20K OHM J
RA32		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
RA33		RD-AZ302J-	R CARBON FILM	1/6 3K OHM J
RA34		5CPX228M--	COIL PEAKING	0.22μ H 5MM J
UA01		976541204	PCB PREAMP	115.2×41.2×1.6T(1080)

7-1-4. PCB FRONT AS (97PB186000)/DVR-1811 SERIES

LOC	A/J	PART CODE	PART NAME	PART DESC
C701		CBZP1C103M	C CERA SEMI	Y5S 16V 0.01MF M A×IAL
DL701		DSLR34MC3-	LED	SLR34VC3 (GREEN)
DL703		DSLR34MC3-	LED	SLR34VC3 (GREEN)
DL704		DSLR34MC3-	LED	SLR34VC3 (RED)
DL705		DSLR34MC3-	LED	SLR34VC3 (GREEN)
DL706		DSLR34MC3-	LED	SLR34VC3 (RED)
RH701		1DHR38---	IC UNIT R/RECEIVER	DHR38 (FO=38KHZ) PREAMP
R701		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R702		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R703		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R704		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R705		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R706		RD-AZ331J-	R CARBON FILM	1/6 330 OHM J
R707		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R708		RD-AZ161J-	R CARBON FILM	1/6 160 OHM J
R709		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R710		RD-AZ361J-	R CARBON FILM	1/6 360 OHM J
R711		RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R712		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R713		RD-AZ161J-	R CARBON FILM	1/6 160 OHM J
R714		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R715		RD-AZ361J-	R CARBON FILM	1/6 360 OHM J
R716		RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R717		RD-AZ112J-	R CARBON FILM	1/6 1.1K OHM J
R718		RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J
R719		RD-AZ432J-	R CARBON FILM	1/6 4.3K OHM J
U701		97P6541205	PCB FRONT	298×197×1.6T/3 (1080)

7-1-5. PCB FRONT AS (97PC11320)/DVR-1383 SERIES

LOC	A/J	PART CODE	PART NAME	PART DESC
C701		CCXF1H103Z	C CERA	HIKF 50V 0.01MF Z
DL701		DSLR34MC3-	LED	SLR34VC3 (GREEN)
DL702		DSLR34MC3-	LED	SLR34MC3 (GREEN)
DL703		DSLR34MC3-	LED	SLR34MC3 (GREEN)
DL706		DSLR34VC3-	LED	SLR34VC3 (RED)
DL707		DSLR34MC3-	LED	SLR34MC3 (GREEN)
DL708		DSLR34MC3-	LED	SLR34MC3 (GREEN)
DL709		DDL1LRE---	LED	DL-1LRN
JP701		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP702		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP703		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP704		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP705		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP706		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP707		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JP708		85801065GY	WIRE COPER	AWG22 1/0.65 TIN COATING
JW701		97P880C115	CONN AS (LUG AS)	4.2D ONE TYPE 150MM
PJ701		97P8807808	CONN AS (Y7808)	MAIN-FRONT (11P-11P)
P701		97P6291298	CONN ANGLE WAFER	WIBP-11R-20T
RM701		1DHR38----	IC UNIT R/RECEIVER	DHR38 (FO=38KHZ) PREAMP
R707		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R708		RD-AZ161J-	R CARBON FILM	1/6 160 OHM J
R709		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R710		RD-AZ361J-	R CARBON FILM	1/6 360 OHM J
R711		RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R712		RD-AZ102J-	R CARBON FILM	1/6 1K OHM J
R713		RD-AZ161J-	R CARBON FILM	1/6 160 OHM J
R714		RD-AZ221J-	R CARBON FILM	1/6 220 OHM J
R715		RD-AZ361J-	R CARBON FILM	1/6 360 OHM J
R716		RD-AZ511J-	R CARBON FILM	1/6 510 OHM J
R717		RD-AZ112J-	R CARBON FILM	1/6 1.1K OHM J
R718		RD-AZ332J-	R CARBON FILM	1/6 3.3K OHM J
R719		RD-AZ1122J-	R CARBON FILM	1/6 1.1K OHM J
R721		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW701		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW702		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW703		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW704		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW705		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW706		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW707		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW708		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW709		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW711		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
SW712		5S50101290	SW TACT	SKHVBD, 1C-1P, HLN/T5.0-A
U701		97P6541210	PCB UNION	300X164X1.6T(128N)
0001		97P2331100	HOLDER LED	ABS